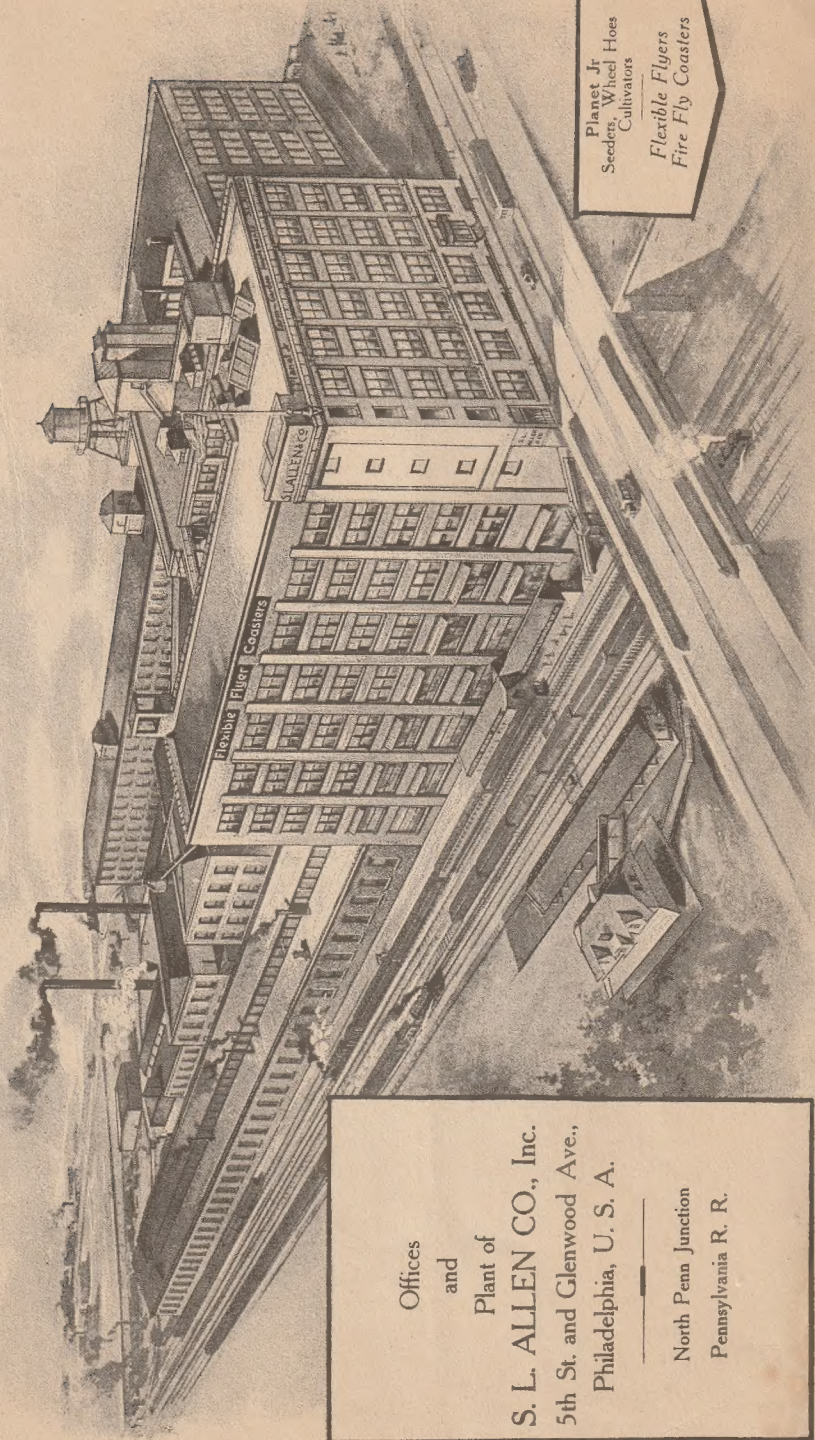


Planet Jr.

FARM AND GARDEN TOOLS



Planet Jr. Works.



Offices
and
Plant of
S. L. ALLEN CO., Inc.
5th St. and Glenwood Ave.,
Philadelphia, U. S. A.

North Penn Junction
Pennsylvania R. R.

Planet Jr

Catalogue No. 51

IN the business of Farming and Market Gardening—as in all other industries—profit or loss, success or failure, is determined very largely by the use of time and labor saving machinery, and by its correctness of design and quality.

In buying time and labor saving machinery for farm and garden, quality is the first consideration; good and economical work cannot be done with poor tools.

Planet Jr. Farm and Garden Tools have stood at the top for quality and design for fifty years—and are as good today as they ever were.

In addition to the old favorites, we call your attention to the new additions to the Planet Jr. line: the No. 54 Two Row Riding Sugar Beet Cultivator, the Two, Three, Four, Five and Six Row Multiple Seeders, the Improved No. 20D Fertilizer Drill, and the machines and attachments listed under Tractor Attachments on page 67.

Our Experimental Department—the members of which are practical farmers and gardeners—want to advise you as to the Planet Jr. tools best suited to your requirements. Call upon them at any time.

S. L. ALLEN & CO., Inc.
PHILADELPHIA, U. S. A.

Our Creed

IT IS an invariable rule of ours to make everything of the best material and in the best form and never to lower the quality of our goods. From the very beginning we have improved our designs wherever it seemed possible, and have never allowed the quality to depreciate. No prospect of increased profit has caused us to swerve from the determination to offer as good tools each year as we have ever made before, or else better ones. We intend this to be perpetual.



HAND SEEDERS



PLANET JR. HILL AND DRILL SEEDERS

Planet Jr. seed sowers were first made in 1871. The machines on the market then were crude and unsatisfactory, so that most planting of garden and field seeds was done by hand. Our first machines were substantial and the most modern in those days. They were so simple and accurate and saved so much time and labor that they were promptly adopted and recommended by leading seedsmen and seed growers, and their use has since spread all over the world among market gardeners, general farmers, nurserymen, sugar-beet and onion growers, poultry raisers and those who have only a home garden. The Planet Jr. line to-day includes machines which will plant, not only in drills or rows, but also in hills at 4, 6, 8, 12 or 24 inches apart. The Planet Jr. line also includes large seeders for large growers, small seeders for small growers, and combined implements for those who want a seeder, cultivator, hoe, plow, rake, etc., all in one tool. Always mention numbers in ordering parts.



Do you work like this?



Or the Planet Jr. Way?



The publicity given to the importance of increased food supply and reducing the cost of living by personal effort has had one effect which will be beneficial and lasting; that is, that thousands of people are now cultivating gardens who have never done so before; thousands of people, therefore, are making a large saving in their living expenses and finding out, perhaps for the first time in their lives, what fresh peas, beans and corn taste like when they are right out of the garden. The work of cultivating these gardens is made easy by the use of the modern seed drills and wheel hoes, as is shown by the fact that now many of the most enthusiastic gardeners are women. A little sunburn and sore hands are the first effects of this garden cultivating, but this is soon succeeded by a sense of pride in achievement, and a toning up of the whole physical system through exercise.

Planting must be regular, accurate, at the proper depth and in a narrow line, to make after-cultivation easy and to produce a large, even crop.

These points are important, because hoeing and cultivating are repeated frequently during the season and are simplified by a uniform stand and narrow, straight rows. For many crops a better stand and a saving in seed is obtained by planting in hills.

Planet Jr. Seeders and Wheel Hoes are adapted to the use of a strong man, yet are light and evenly balanced enough to be comfortably used by boys and women.

The small grower should select one of our combined machines such as a No. 4, or 25. The drill attachment will not be used as often as the hoeing and cultivating tools, but will be a source of much saving. With improved tools the care of your garden will be a pleasure instead of a task, and will result in a wealth of delicious vegetables for table use for a small outlay. The smaller machines are also suitable for use in the farmer's garden, but market gardeners should choose the larger tools, such as Nos. 3, 5, or our Multiple Seeders on pages 13-16, to be followed in the cultivating season by Planet Jr. Double and Single Wheel Hoes, etc.

The following are some of the seeds that may be planted with **Planet Jr. Seeders**:

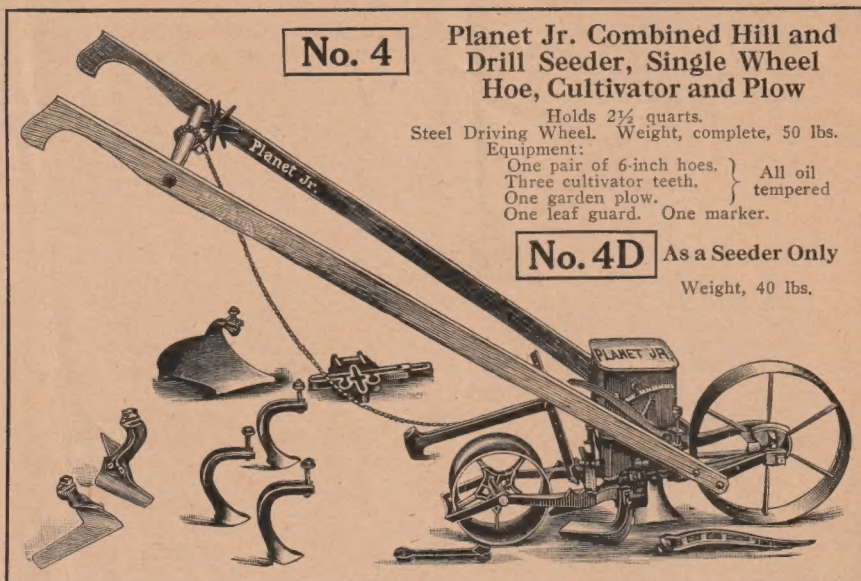
Apple,	Cauliflower,	Ginseng,	Okra,	Pepper,	Salsify,
Asparagus,	Celery,	Kale,	Onions for Bulbs,	Pickle,	Savory,
Beans,	Chicory,	Leek,	Onions for Sets,	Radish,	Spinach,
Beets,	Cucumber,	Lettuce,	Parsley,	Rape,	Sugar Beet,
Cabbage,	Endive,	Mangold,	Parsnip,	Rice,	Tobacco,
Cantaloupe,	Field Peas,	Marjoram,	Pear,	Ruta Baga,	Tomato,
Carrot,	Flower Seeds,	Melon,	Peas,	Sage,	Turnip.



A Garden Tool for Every Purpose



HAND SEEDERS



No. 4

Planet Jr. Combined Hill and Drill Seeder, Single Wheel Hoe, Cultivator and Plow

Holds $2\frac{1}{2}$ quarts.
Steel Driving Wheel. Weight, complete, 50 lbs.

Equipment:

One pair of 6-inch hoes. } All oil
Three cultivator teeth. } tempered
One garden plow.
One leaf guard. One marker.

No. 4D

As a Seeder Only

Weight, 40 lbs.

The No. 4 Seeder is a special favorite; there are doubtless more of them in use in the world than any other seeder made. Gardeners and farmers having a family garden who fear that they haven't quite enough work for a drill to do will nevertheless find this combined tool will quickly pay for itself in time and labor saved and increased crops. With it one can do almost all the hoeing and general work in the garden, for it combines in one machine:

An accurate hill-dropping seeder.

A continuous row seeder.

An admirable single-wheel hoe.

A splendid single-wheel cultivator.

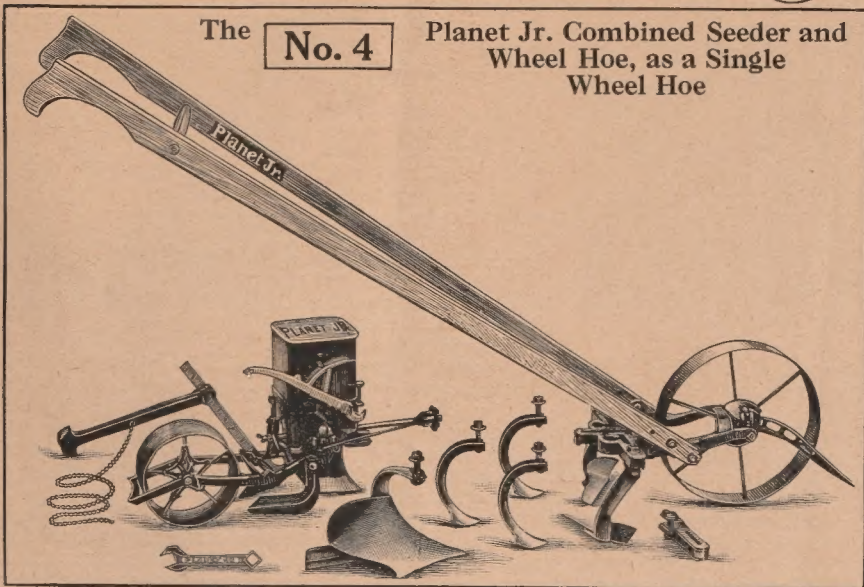
An excellent furrower.

A rapid and efficient wheel garden plow.



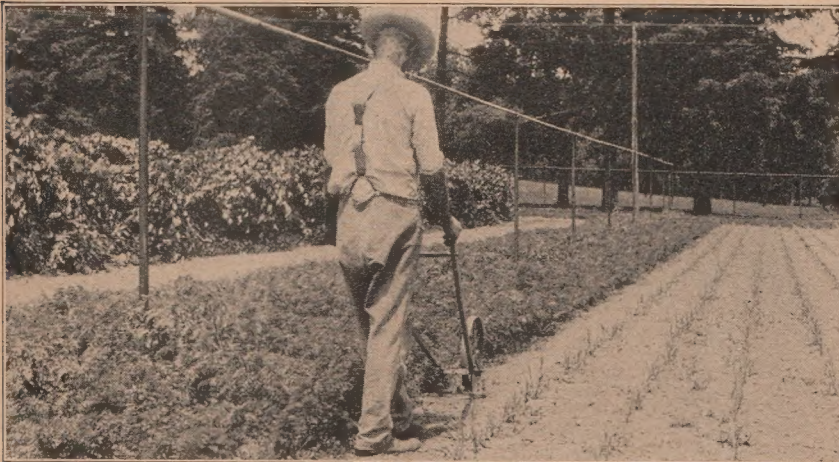
Reliable and accurate work with the Planet Jr. No. 4 Seeder

HAND SEEDERS



It sows all garden seeds in continuous rows with uniformity, or in hills 4, 6, 8, 12 or 24 inches apart, and at the same time marks the next row. It is accurate, simple, durable, reliable and easy running.

The sowing device consists of a feed wheel with four wings arranged on a spindle and driven by beveled gears from the main wheel. The feed wheel revolving in a brass cylinder, which opens into the hopper above, agitates the seeds so that they drop in a regular stream through a diamond-shaped opening at the bottom. This opening can be adjusted accurately by a brass set screw and cut-off sliding on the outside of the cylinder, and connected to a lever and index at the right-hand side of the hopper. The index contains the names of the principal seeds and indicates separately, the proper adjustment of the seeder for sowing in hills and in drills. Having set the index for any seed the feed can be shut off instantly, and instantly opened again to the proper size. The opening plow and coverers are adjustable for depth. The feed is automatically stopped by raising the handles, and started by lowering them.

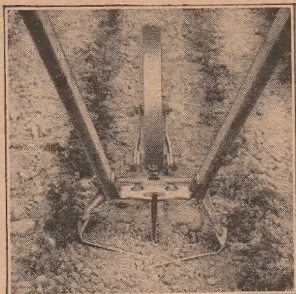


No. 4 as Single Wheel Hoe—A Great Time Saver



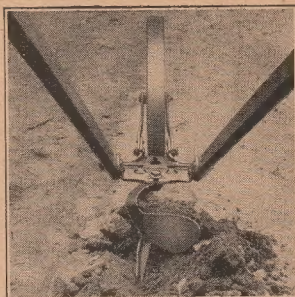
HAND SEEDERS

No. 4—Continued



Weeding

A cut-off lever is easily operated by the hand or foot from between the handles, and the index shows clearly whether the drill is sowing or not. When dropping in hills the seeds fall from the hopper upon a shutter, which is lifted at regular intervals by a toothed spacing wheel at the back of the hopper, and thus the seeds are dropped in neat hills, which may be



Plowing

either 4, 6, 8, 12 or 24 inches apart. The hill-dropping mechanism is substantial, positive and exact. To sow in a continuous row the dropper is simply disconnected. The change from hill dropping to drill work and vice versa can be made in a moment. The steel driving wheel is strong and carefully made. The handles adjust to suit man or boy and are of such shape as makes pushing easy. The No. 4 Planet Jr. is particularly valuable for planting onions, spinach, turnips, lettuce, celery, cabbage, radish, peas, beans, beets, okra, parsley, parsnip and salsify.

For use as a wheel hoe the seeding parts are removed and the wheel hoe tool frame substituted by changing a single bolt. It then becomes a fine single-wheel hoe with an admirable variety of tools and a rapid-change frame, all in most convenient form.

If your garden is small you may break it up with the turning plow running twice in a furrow and as deep as possible. If large, a horse plow should be used or the ground should be deeply spaded. With one cultivator tooth, mark out rows for onion sets and for plant setting. With the plow open drills for manure, potatoes, large seed, etc., and cover with a furrow from each side. During the growing season, hoe, cultivate deep or shallow, plow to or from the crop as needed.

The pair of hoes is the most continuously useful of all the attachments. They not only keep the weeds down, giving air and light to the plants, but make a fine surface mulch which prevents evaporation of moisture from the soil below, and carry the plants through exceedingly dry weather. Use often, especially after heavy rains, to keep a crust from forming on the surface. The curved shield-like front ends enable them to be safely run close to the crop without danger to leaf or root, and they leave the ground almost level. When the plants are small use the frame side-extension and hoe both sides of the row at one passage. Greatly improved recently.

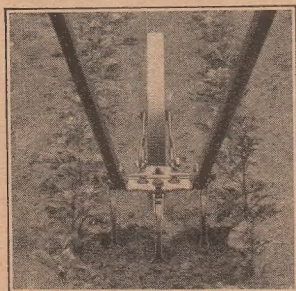
The three steel cultivator teeth are used for all deep and thorough work, and are also adapted to shallow cultivation and marking out for onion sets and plants, and for working six-inch rows. The large garden plow is constantly useful from spring until fall for plowing and cultivating and for drawing furrows and covering them, making ridges for seeder or for plants, or working to or from the row for hilling corn and other crops. Special: Peat Land Opening Plow, K-362, Onion Seed Opening Plow, K-280.

The leaf lifter is invaluable for late cultivation, making it easy to work crops like peas, carrots, beets, strawberries, etc., closely without additional labor, when other-

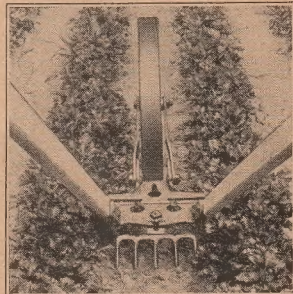
wise it would be almost impossible to work them.

Rakes: We supply three rakes having three, five or seven teeth, as extra; valuable for fining and leveling the surface and for shallow cultivation.

Disc Hoes, Special cultivator teeth, three-prong teeth, Double Moldboard Plow, Onion Harvester, Special Peat Land Hoes; see page 30.

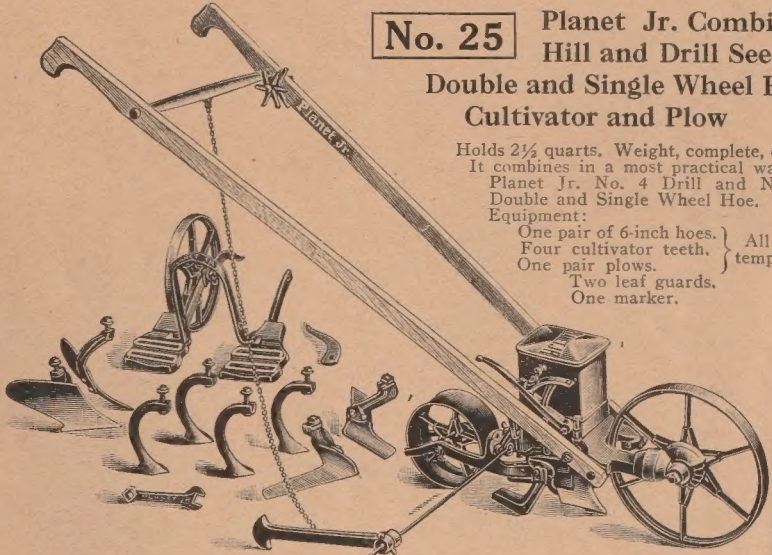


Cultivating



Raking





No. 25 Planet Jr. Combined Hill and Drill Seeder, Double and Single Wheel Hoe, Cultivator and Plow

Holds 2½ quarts. Weight, complete, 61 lbs. It combines in a most practical way the Planet Jr. No. 4 Drill and No. 12 Double and Single Wheel Hoe.

Equipment:

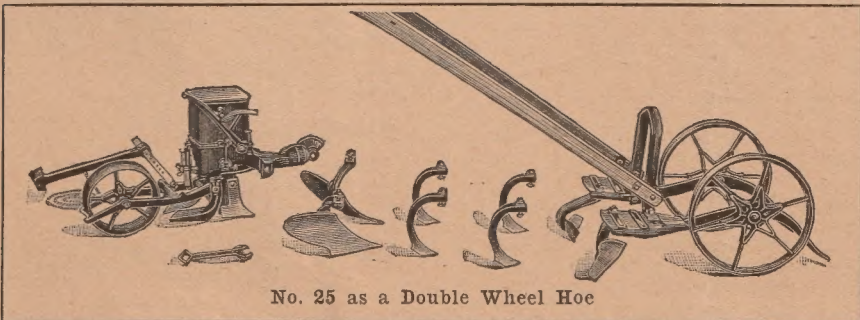
One pair of 6-inch hoes.	} All oil tempered
Four cultivator teeth.	
One pair plows.	
Two leaf guards.	
One marker.	

The No. 25 Combined Seeder, Double and Single Wheel Hoe is recognized by hundreds of users and recommended by them as being the "Complete Gardener." It sows practically all vegetable seeds, either in hill or drill, accurately and without waste. Practically any kind of cultivating can be done at any stage of growth of various crops with the variety of cultivating tools furnished with this machine.

It is valuable to gardeners or farmers who have enough acreage for a Double Wheel Hoe to be used, and yet prefer not to buy Seeders and Wheel Hoes separately, also for onion growers and for the large family garden where both a Single and Double Wheel Hoe can be used to advantage. The hopper holds four pounds of onion seed.

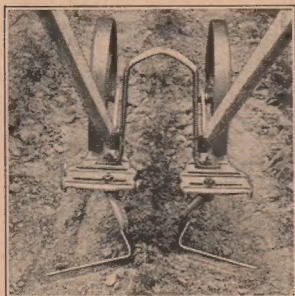
As a seeder it is practically the same as the Planet Jr. No. 4; for description see page 4. It sows in drills or drops in hills, 4, 6, 8, 12 or 24 inches apart; has the same feed, hill-dropping mechanism and automatic device for stopping the feed, and also a capital seed index.

It is thoroughly substantial and accurate in planting. Its simplicity, both as a seeder and as a wheel hoe, makes the combination thoroughly satisfactory.





Saving Time and Seed with a No. 25 Seeder



Weeding

As a wheel hoe it is practically the same as Planet Jr. No. 12, and with No. 12 equipment (see page 20), so it can be used either as a double wheel hoe to straddle the row or between rows as a single wheel hoe.

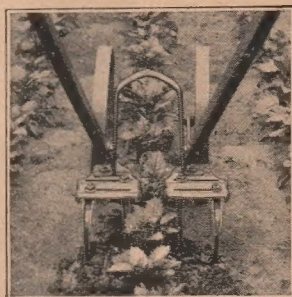
The frame is steel and practically indestructible.

The hoes are of special form, which enables the operator to run very close to the row without endangering either leaves or roots, yet doing clean work and leaving the ground almost perfectly level. These hoes are the most useful of all the attachments. Use them for 8-, 10-, 12- or 14-inch rows; add cultivator teeth when working between wide rows. The hoes are thorough weed destroyers and useful the season through, worked either as shown in the cut or sides exchanged. The slotted frame allows setting them

close together for plants when small, and wider as the season advances; the high arch enables one to straddle the rows the greater part of the season. This insures labor-saving work. Greatly improved recently. (See page 19.)

The cultivator teeth, with narrow neck, do thorough work yet leave the ground practically level. Used for all deep cultivation; also adapted to shallow cultivation and marking out, and for working 6-inch rows. They leave the ground well stirred, making a good mulch. A single tooth on each side of frame will make two furrows for onion sets, large seeds, etc., up to 13½ inches apart.

The plows are used with points close together for furrowing out for manure, fertilizer, potatoes, seeds, etc., and reversed for covering, hilling and for making up rows for setting out plants. The cuts show them opening and also closing a furrow. Later in the season they are excellent for thorough cultivation. First, straddle the row and plow shallow furrows away from the crop; after a few days exchange the plows and throw the



Cultivating

HAND SEEDERS



No. 25—Continued



Opening furrow

From one to two acres a day can easily be hoed with this implement, and the work will be done better than several men could do it in the same time with hand hoes.

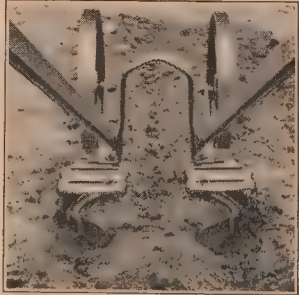
We can supply a special plow (K-280) for onion seed for sets, leaving seed in a wide band. A special peat land plow (K-362) also fits this tool. It opens

earth back again. This gives thorough and excellent cultivation, hilling the crop much or little, as desired, killing and covering all weeds and grass.

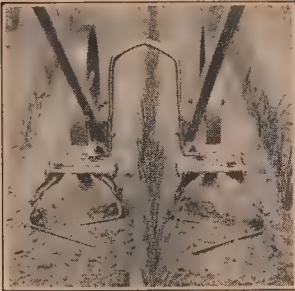
The leaf lifters are invaluable in late cultivation, making it easy to work crops like peas, carrots, beets, strawberries etc., closely, when otherwise it would be impossible to work them at all.

The marker makes a plain line, marking from 6 to 20 inches, and is easily changed from side to side.

and pushes aside the loose, spongy soil and makes a narrow track for the seed. Disc hoes, three-prong teeth, rakes, etc., shown on page 30 will also fit this machine.



Closing furrow



Hoeing two rows at once

VAUGHN E. WOLF, Melba, Idaho, writes: "Our Seeder and Cultivator No. 25 are used extensively as we raise lettuce and believe we get better results from ours than others do from other makes. We would not be without one." (June 12, 1923.)

HARRIMAN LONGLEY, Shirley, Mass., writes June 12, 1922: "Have a fine stand of peas planted with the No. 25

Seeder—straight and even. Our first trial with a Seeder. We are very much pleased with it."

C. S. GRAYVILLE, Middleburg, Pa., writes May 31, 1921: "I am a user of your 'Planet Jr.' No. 25 Hand Cultivator and would say it is the best I ever had. I cultivate two acres and use nothing but Planet Jr."



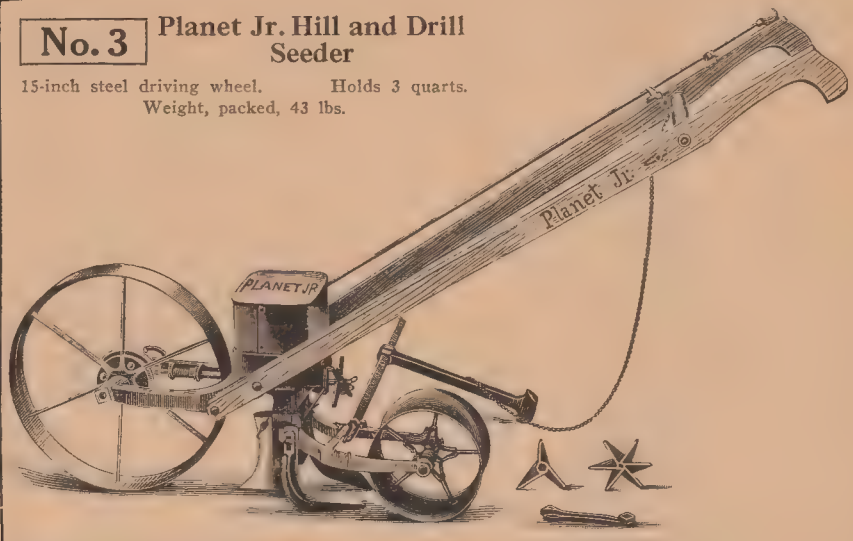
"The Complete Gardener"—Ready for Any Gardening Work



HAND SEEDERS

No. 3 Planet Jr. Hill and Drill Seeder

15-inch steel driving wheel. Holds 3 quarts.
Weight, packed, 43 lbs.



The No. 3 Planet Jr. Seeder only is a popular size at a moderate price. We recommend that customers buy separate seed drills and wheel hoes where they have enough work to warrant it, and this is the size that should be bought, except by the very largest market gardeners and sugar beet growers, etc., to whom we recommend No. 5; also Multiple Seeders, shown on pages 13-16. The steel driving wheel, with heavy steel spokes, not "piano wire," is of proper height, with broad face, making the tool light and easy running, even with the hopper filled to the brim. The special force feed is admirable, working equally well whether sowing with an ounce or a full hopper. When drawn backward the feed wheel is thrown out of gear. When passing from field to field the cam lever at "A" may also be used to throw gears



The No. 3 or 5 Seeder—The Market Gardener's Favorite

HAND SEEDERS



out of contact. The hill dropping is simple and reliable, spacing hills either 4, 6, 8, 12 or 24 inches apart. Changes of distance between hills may be made in less than a minute, by changing spacing wheels. From hill to drill—This change is made or reversed almost instantly.

The index—The thickness of seed is regulated by an accurate index with brass screw adjustment; it contains the names of the important seeds, and is carefully graduated, both for hills and drills. It is within easy reach at the top of handle. **The cut-off**—The flow of seed is instantly stopped by pulling the cut-off at the top of the handle, and started as quickly by reversing. Not a hill need be missed in starting, nor any seed wasted in stopping.

The opening plow is adjustable for depth, and sows in a narrow line, making close wheel-hoe cultivation easy, saving nearly all hand work, as the weeds usually stand a little to one side or the other of the row and are quickly exterminated, to the great surprise of the unaccustomed operator.

The coverers are adjustable to throw more or less earth on the seed. The roller is broad and hollow faced, leaving a convex surface over the seed which has the effect of letting the plants come through the ground more easily.

The marker rod is steel and the drag bar makes a clear line and is adjustable from 6 to 20 inches. The marker is changed from side to side from between the handles.

The No. 5 Hill and Drill Seeder is undoubtedly the best Seeder made for Market Gardeners, Sugar Beet and Bean Growers, Onion Set Growers and other large planters.

The style of construction and mechanical details are the same as the No. 3 Seeder, but holds 5 quarts of seed instead of 3.

The No. 5 Seeder is a saver of time, labor and money, especially to the larger Market Gardeners and Growers. The quality and mechanical features of the machine are such that it is always ready for work and does that work quickly. Its large capacity saves time and labor. Its uniform planting saves labor in the cultivation of your crops; and by its accurate and economical sowing of seed you find that you need less seed, and thus save money on your seed bill.

A special 4-inch plow (K-281) and coverers (K-227-8) for onion seed for sets, fit No. 3 and No. 5 Seeders.

Peat Land Plow. For peat lands we offer a special opening plow (K-282).



Peat Land Plow



Onion Seed Plow and Coverers

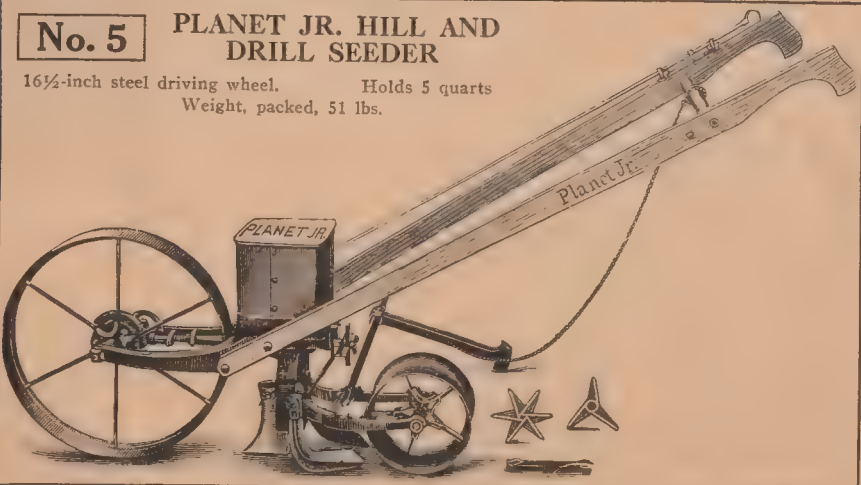
No. 5

PLANET JR. HILL AND DRILL SEEDER

16½-inch steel driving wheel.

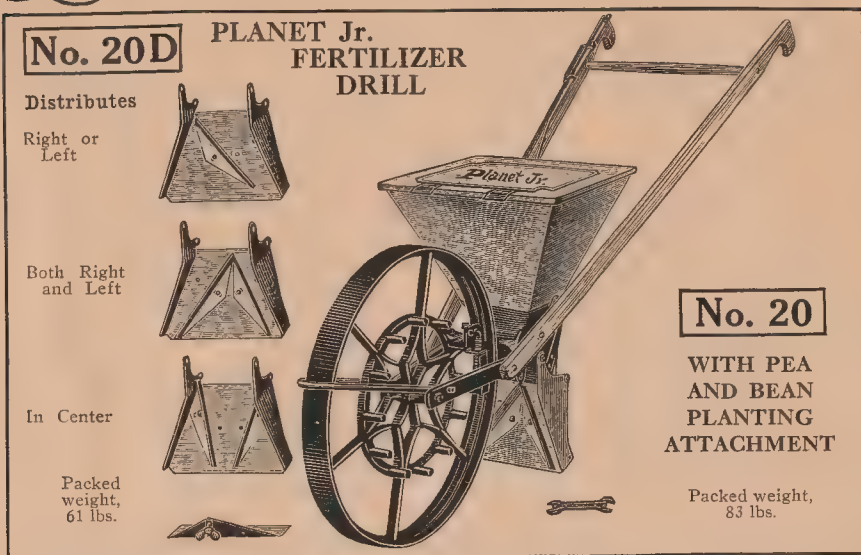
Holds 5 quarts

Weight, packed, 51 lbs.





FERTILIZER DRILL



Don't waste fertilizer by broadcasting before seeding. The more successful and economical way is to apply part of the fertilizer in the row at seeding time, and then use the No. 20-D Fertilizer Drill to side-dress with a quick acting fertilizer such as Nitrate of Soda. Your crops, fertilized in this manner will make a quick growth and produce a more tender crop, which will sell quickly and get you better prices, as well as establishing a reputation for high quality produce.

Included in the Planet Jr. line for some years has been a combined seed and fertilizer sower. To meet the demand for a larger drill for fertilizers only, we now supply the No. 20-D Fertilizer Drill, the most efficient and practical of its kind.

The driving wheel is 20 inches in diameter with a 2-inch face and with a series of pins on one side, which operate the agitator lever.

The hopper holds one-half bushel. An oscillating feeding shelf covers the open bottom of the hopper, and by quick reciprocating motion feeds the fertilizer

evenly through a rear discharge spout which is regulated in size by a feed rod and an index at the top of the handle.

The index is graduated and is controlled by a brass thumb nut and slide. Instantly thrown out of gear by the feed rod.

The new type spout makes it possible for you to distribute the fertilizer in three ways: to the right and left, down the center of the row; or, all to one side—right or left, as you desire. Note illustration of three arrangements of the new spout above.

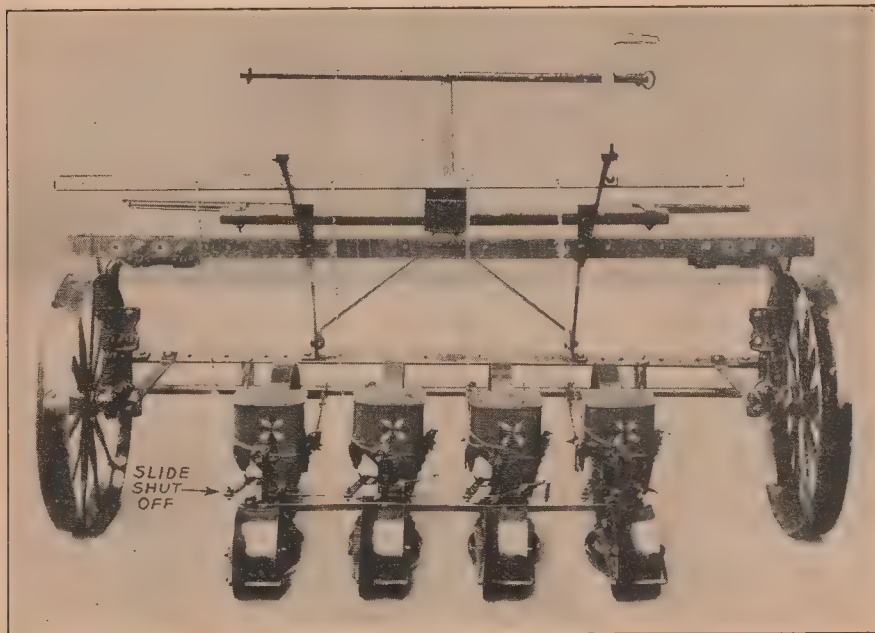
What the No. 20-D Drill will do: Sow fertilizers evenly 100 to 1,000 pounds to the acre. With material in any reasonable condition it will not clog; galvanized, no cogs, gears or stirring devices. Will give perfect satisfaction.

The Pea and Bean Planter attachment can be supplied for use with this machine. Includes opening plow, coverer, roller and marker. With it, peas and beans can be sown in any quantity, with the greatest regularity.



Side-dressing with Fertilizer When Most Needed

MULTIPLE SEEDERS



No. 154 Seeder (Rear View)

No other Gang or Grain Seeder is capable of handling the **great variety** of vegetable seeds with the **accuracy** of the Planet Jr. As the seeding device is the same on all the machines, each will plant the following successfully, in fact any similar seeds.

Alfalfa	Carrots	Endive	Lettuce	Ruta Baga
Beans	Cauliflower	Flower seeds	Onion	Salsify
Beets	Celery	Ginseng	Radish	Spinach
Cabbage	Chicory	Kale	Rape	Sugar Beets
Cantaloupe	Cucumber	Leek	Rice	Turnips

Do not be misled by the fact that you already have a Grain Drill or some other machine that might be used as a make-shift. Buy a Planet Jr. and be certain the seed you spend good money for is properly planted, not too thick or too thin or buried, but just right in every respect. See illustration on page 14, showing how one man is paying for his Drill by the seed saved this year. You also may be able to purchase a machine through the saving effected.

Some of the important features common to all Planet Jr. Gang seeders are: An efficient slide shut off enables the operator to shut off the seed in each Drill simultaneously without moving the seed index setting. This feature prevents loss of seed, also obviates necessity of changing the indexes until the whole crop is put in. Each slide has a **spring lock** which prevents accidental opening or closing by vibration.

A wide adjustment of rows and in every case seeders are tied together in the rear by spaces which allows free action of Drills up and down, and at the same time insures parallel rows equally spaced.

A new index or seed adjustment, which is very accurate, is held to the setting by a thumb nut thus eliminating any chance of slipping. Hoppers each hold 3 quarts and all Drills have the new **floating coverers**, which are self adjusting, and insure uniform covering and therefore a uniform stand. This feature is very necessary when planting spinach or lettuce.

With a gang seeder made of individual Drills it is a very simple matter to adjust them so that each row will contain the same amount of seed. For this reason the machines can all be set to sow less seed per acre and yet get a better



MULTIPLE SEEDERS

stand than by hand planting. The rows are also much straighter allowing better and more thorough cultivation, which insures a better crop at a minimum cost.

All Drills will be equipped with a special opening plow or shoe K-282 (unless otherwise ordered), which makes a

V-shaped smooth furrow, insuring the seed being planted in a narrow straight row, allowing very close early cultivations. The shape of the plow with the high point prevents clogging and passes more freely over loose trash, etc., which is an essential point to consider.

No. 154 Seeder for 2, 3, 4, 5 and 6 Rows

This Planet Jr. machine is designed for all round planting with a team, whether seeding is to be done on prepared level ground, four or five rows on beds, or single or double rows on beds for irrigation purposes.

The 24-inch wheels are adjustable from 36 inches to 70 inches apart, thus taking care of any possible arrangement. For planting on beds the wheels can be moved in to fit the ditches or alleys, two Drills planting the center bed and the Drills outside of the wheels planting on the adjoining bed, each return trip sowing four complete beds. The wide range of adjustments and the flexibility of the machine enables you to do the work described above and many other variations can be made to suit the requirements of practically all planters everywhere.

The Three plants 3 rows 9 inches up to 3 rows 30 inches apart

The Four plants 4 rows 9 inches up to 4 rows 20 inches apart

The Five plants 5 rows 9 inches up to 5 rows 15 inches apart

The Six plants 6 rows 9 inches up to 6 rows 12 inches apart

If wider range is required a longer pipe and pick-up bar can be substituted.

In order that the same machine can be used either for planting on beds, or on level ground, the front of the machine can be raised or lowered a sufficient amount to plant either way perfectly. The latch on the end of the draw-bars of

the seeders also has an adjustment which insures each Drill being picked up when the lever is used to raise them.

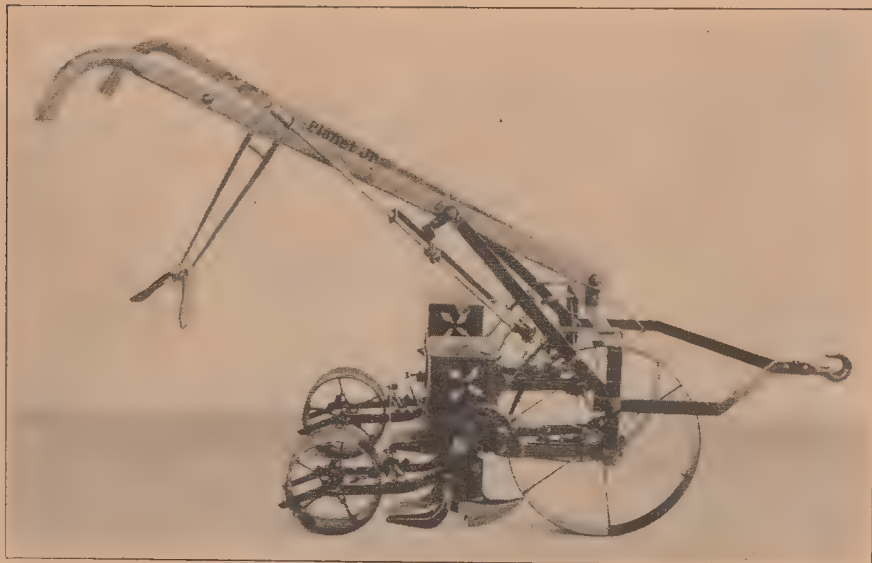
A marker attachment can be furnished (at extra cost) for use when planting on level prepared beds. Weight, 25 pounds.



Mr. Lambert's No. 154 Planet Jr. Seeder at Work Planting Several Hundred Acres in Spinach, at Norfolk, Va.



No. 157 Two Row Seeder



No. 157 Two Row Seeder (Side View)

This little Planet Jr. combination is particularly adapted for use when planting on beds. The best results are obtained by using a small team in the alleys with the drills between, on the bed. This has become a very popular method in Southern California for lettuce and table beets, etc.

The machine works equally well with a single horse in the alleys and the Drills on either side of the furrow. This arrangement has proved satisfactory in Colorado, where it is necessary to plant on the extreme edges of the narrow furrow, in order to get the lettuce near the water.

The Drills are adjustable from 10 inches to 24 inches apart, although it is

not likely that the narrow distances will be used when the machine is drawn by a horse. **Clutches** are provided to throw the feed wheels out of gear when going to and from the field, preventing the seed from being damaged. This makes an easy outfit to handle at the end of the rows.

A **Marker Attachment** can be furnished for the No. 157, as an extra, but it is not included in the complete machine.

The draft of this seeder is so light that **one man** can push it successfully, but for all day planting, an additional man or boy pulling on the front makes the draft a negligible quantity.

Net Weight	Packed Weight
73 lbs.	117 lbs.

No. 158 Four Row Gang Seeders

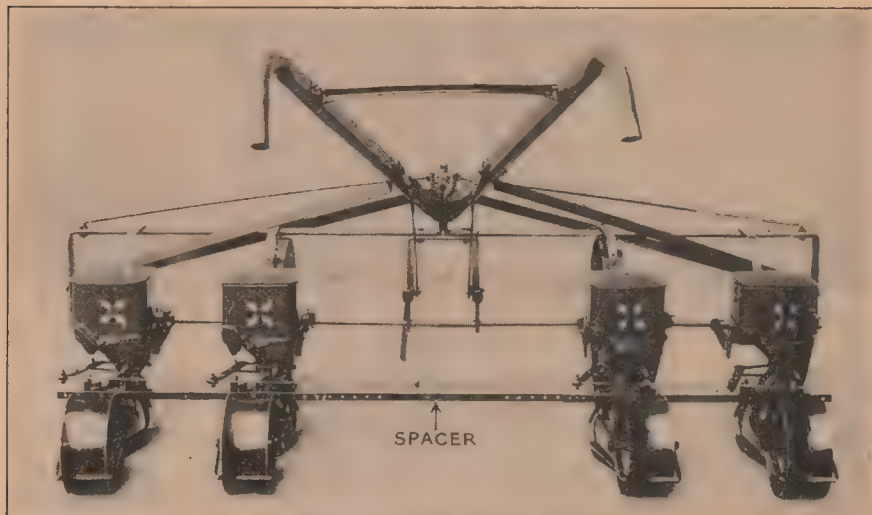
Like the two row, this combination is best fitted for use in irrigated country, or where beds are made up in advance ready for the planting. One horse in the alley with two Drills on the beds at either side makes a fast and an efficient planter that is hard to beat. The minimum and maximum setting of the inside Drills is 20 and 30 inches making the minimum and maximum of the outside Drills 10 to 20 inches apart. This allows the centers of the beds to vary from 30 to 45 inches. Many variations in between the above limits are possible, so that all conditions are well taken care of.

The Drill wheels carry the weight of the machine, when turning at the end of the row, making handling easy. **Clutches** are provided to throw the spindles out of gear when going to and from the field.

This seeder is **not** recommended for level planting and therefore no marker can



MULTIPLE SEEDERS



No. 158 Four Row Gang Seeder (Rear View)

be supplied. The No. 151 is the proper machine for accurate, level planting and should be given the preference, as it can also be used for raised beds.

Net weight, 144 lbs.

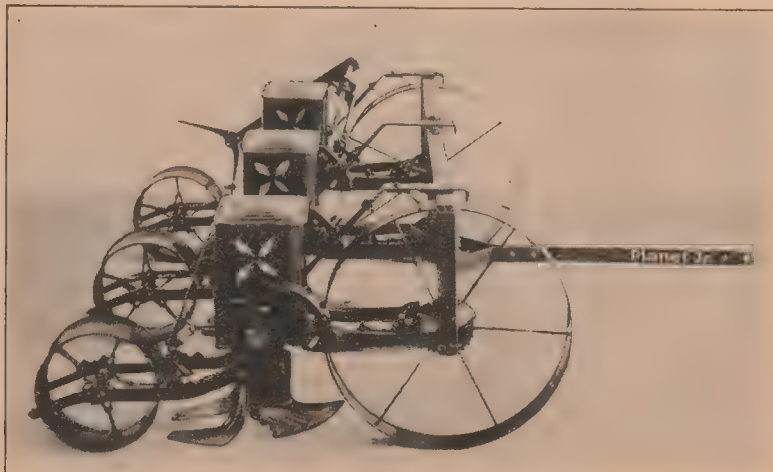
Packed weight, 220 lbs.

No. 152 Three Row Tractor Seeder

This drill has proven to be the most satisfactory tractor Seeder on the market. It is easily handled at the ends of the rows, and can be driven just as straight and easily as the other types of gang Seeders. All the good features proved out the past years have been retained and others added, so that this is a complete outfit adapted to all small tractors.

Each type of Tractor requires a different type of hitch. When ordering specify the Make and Year, or Model of Tractor.

The Drill settings are 11 to 18 inches apart. The smallest Tractor made has sufficient power to operate this machine satisfactorily.



No. 152 Three Row Seeder (Side View)



One of the Planet Jr. Wheel Hoe Gangs—Seabrook Farms, New Jersey

Double and Single Wheel Hoes

Seeders and wheel hoes are companion implements, but the latter usually pay for themselves more quickly. Many people who can scarcely be recommended to invest in a seeder may be properly advised to buy a wheel hoe. No one with even a small vegetable garden can afford to be without a Planet Jr. Wheel Hoe. Ten rows of vegetables, 50 to 100 feet long, may be worked beautifully in fifteen minutes.

Our field scenes show how the tools are appreciated both at home and abroad; in fact, wherever thorough rapid hand work is required.

If you have never used any of these tools, rest assured that the saving and satisfaction are enormous. They will do hoeing, cultivating or plowing both sides of a row at once or all the space between two rows at one passage at the speed of a moderate walk. By using these labor-saving tools, growers may safely plant and easily cultivate four times the acreage that they could otherwise. For example, with onion rows 12 inches apart a man can hoe from one to two acres a day; if you do not increase your acreage the time and money saved by the use of wheel hoes soon repay their cost. Practically indestructible, and yet light and easy to handle.

They are equipped with strong steel wheels, not wire or cast-iron, but with heavy steel spokes, high enough to run easily over peat lands and light soils, and where the ground has not been well prepared.

We make a large variety of single and double wheel hoes, both separately and in combination with seeders, as shown on previous pages, and all double wheel hoes can also be used as single wheel hoes. (See page 18.) We recommend the lower-priced and smaller tools for very small gardens. They are especially gotten up for such use, while the more expensive ones with full equipment of tools to suit a great variety of work, are best for the largest market gardens and farms.

Planet Jr. Double Wheel Hoes are the greatest cultivating tools in the world for the onion and sugar-beet grower, and every grower of garden and market garden crops from drilled seed. Bent handles can be furnished when required.



DOUBLE WHEEL HOES

No. 11

Planet Jr. Double and Single Wheel Hoe Combined

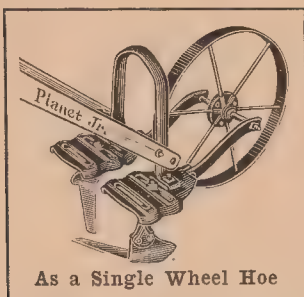
Packed weight, 39 lbs.

Equipment:

One pair 6-inch hoes.	} All oil tempered
One pair 4½-inch hoes.	
Four steel cultivator teeth.	
One pair plows.	
Two 3-tooth rakes.	
Two 5-tooth rakes.	
Two leaf lifters.	



Steel frame.
14-inch steel wheels



As a Single Wheel Hoe

ing a row at one passage with a Planet Jr. Double Wheel Hoe is the great advantage of the tool. It is easier to work the crop closely when hoeing both sides at the same time.



Opening the Furrow

No. 11 Planet Jr. is the most complete combined double and single wheel hoe we offer, and has the largest and most useful set of attachments. The steel frame can be set at different heights to suit any kind or depth of work, and the attachments or their position can be changed in a few seconds.

The arch is high enough to straddle a row until plants are 20 inches high, and this insures close work and death to weeds.

When set up as shown in the cut alongside, it is an admirable single wheel hoe for working between rows. Finish-



Closing the Furrow

With a little practice the operator finds it easy to follow the row accurately by simply keeping it exactly in the center between the two wheels. Keep the teeth sharp and work the crop once a week or after each rain. You will be surprised how completely weeds are destroyed, while the crop is benefited. This is because seeds planted by a good seeder grow in a straight, narrow line, while the weeds come up *irregularly* and are almost sure to be on one side or the other of that line, and are easily victims of the hoes.

The plows are shown as used for making a large furrow for manure or fertilizer or for potatoes, etc., and then by exchanging sides, for covering them. Used also for making up drills for plants and for thorough cultivation by first plowing away from and then returning the soil to the row. Wait a few days between plowing away and returning the earth to the row so the buried weeds may die.

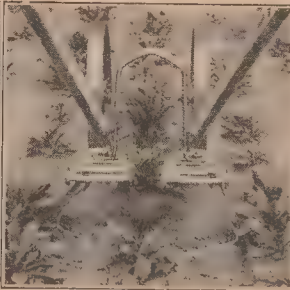
DOUBLE WHEEL HOES



No. 11—Continued



First hoeing



Hoeing both sides at once



Two rows at once

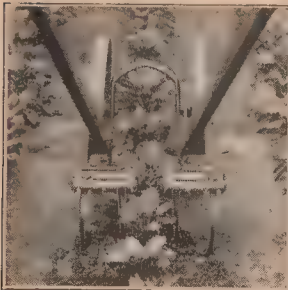
The hoes are most valuable of all wheel-hoe attachments. They are oil tempered and polished.

We are now equipping our wheel hoes with our new patented hoes S-100 and S-101 in place of the C and D-1. These have been thoroughly tested and are pronounced by users as a decided improvement over the old favorites. The new hoes are made with a shorter standard, the steel having a larger and higher shield to protect the small plants from the soil as it drops back from the hoe. This arrangement takes the standard entirely out of the dirt and allows the steel to work more freely through the soil. The new hoes do not draw the earth away from the plants as much as the old ones; the angle of the shield part of the hoe with the direction of motion being 4° or 5° instead of 8° or 10°.

The hoe steel is made of slightly heavier stock than the old style, making a stiffer and stronger blade. The standard is very strong and is provided with a loose bolt which can be renewed easily when the thread becomes worn.

To get the best results from these hoes and all similar attachments they must be wiped clean after using and frequently sharpened with a file or on the grindstone. Try it, and you'll find it pays.

One hoe is set ahead of the other to prevent trash from catching between them and tearing out small plants. The curved shield-like front ends lift overhanging leaves and protect the roots of young plants, while the ground is left level. Use the 4½-inch hoes for 6 to 10-inch rows, the 6-inch for 10, 12 and 14-



Cultivating



Surface cultivation



3-prong cultivator attachment

WM. H. TABB, R3, Hempstead, N. Y., writes: "I have a No. 12 Double Wheel Cultivator. I see several kinds in the stores but none to compare with the Planet Jr."

C. F. BECKETT, Newtown, Ohio, writes: "Last week I bought another Planet Jr. No. 17. I am going to buy a No. 12 in a week or so. I have two boys and we farm three acres all by hand. We use nothing but Planet Jr.'s as I think they are the best garden plows in the world. The No. 4 Seeder is certainly a beauty."

WILLIAM VAN LEVEN, Crawfordsville, Ind., writes June 30, 1921: "I have a No. 12 Double Wheel Hoe. It does excellent work and saves time and strength, for it runs about twice as easy as the average Wheel Hoe."



DOUBLE WHEEL HOES

No. 11 Double Wheel Hoe—Continued

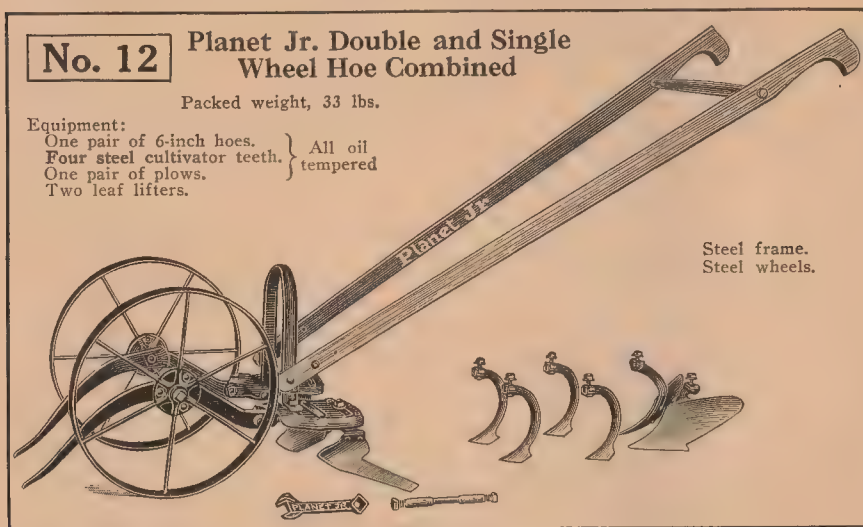
inch rows. For wider work use both pairs of hoes, the narrow ones next to the rows. They will also hoe two rows at once, either 8 or 10 inches apart, or one row thoroughly up to 20 inches. See cuts. The cultivator teeth are of improved design, steel, oil tempered, and are admirable both for deep and shallow cultivation or for marking out.

The rakes are especially adapted to first cultivation of small plants, and also to the ordinary uses of a rake. Use two 3-tooth rakes to cultivate two rows at 6 inches apart, 5-tooth for two rows 10 inches apart, and for wider rows, use two on each side. For surface raking use widths as needed. For fining the soil, the rakes may also be reversed so the teeth slant backward.

The steel leaf lifters save much time in late working, and enable it to be done close to the row without additional labor, when plants are large or leaves too low for ordinary work. The wheels can be raised or lowered to regulate the depth of work or set any distance apart desired from 4 to 11 inches, or one may be used alone as a single wheel hoe. The handles are adjustable for height.

Additional attachments shown on page 30 fit this machine.

The new No. 35 Seeder Attachment shown on page 29, can be used on our Double Wheel Hoes and will prove very valuable to those having but a small garden.



The No. 12 is the most popular Double Wheel Hoe we make. It can be used by man, woman or boy. It is identical with No. 11 except that the 4½-inch hoes and the rakes are omitted from the equipment, and it is sold at a correspondingly lower price. The attachments with it are what gardeners use most, and the short hoes, rakes, and any of the attachments shown on page 30, can be added at any time. You'll be astonished how easy it is to save time, labor, money, and get bigger crops if you use it.

FRANKLIN A. THORNE, Waterville, Kan., writes: "Since I received my plow from the Stowe Supply Company, the garden work was mere play for me. We had a bad garden last year, so the work hasn't been very heavy. The plow is the best and handiest garden tool I ever had a hold of. It is sure worth the money. It is a No. 12 Single and Double Wheel Hoe."

B. GEISSLER, Carthage, R. D. No. 2, Ill., writes as follows: "Please send me by mail two Hoe Blades for an old Planet Jr. Double Wheel Hoe. The Hoes are the only thing that gave out after 25 years' use, and I hope in getting these blades (which I think can be riveted on by a blacksmith) I can use it for the rest of my life."

CHARLES F. HUNTER, Canandaigua, N. Y., writes: "I have had the Planet Jr. No. 12 two weeks and it has paid for itself already. You can refer anyone to me. It is 'some' tool. Gardening is gardening now."

JAMES D. DAVIS, Tionesta, Pa., writes: "I have owned and used one of your Planet Jr. Wheel Hoes for 20 years and it is as good as the first season it was used."

DOUBLE WHEEL HOES

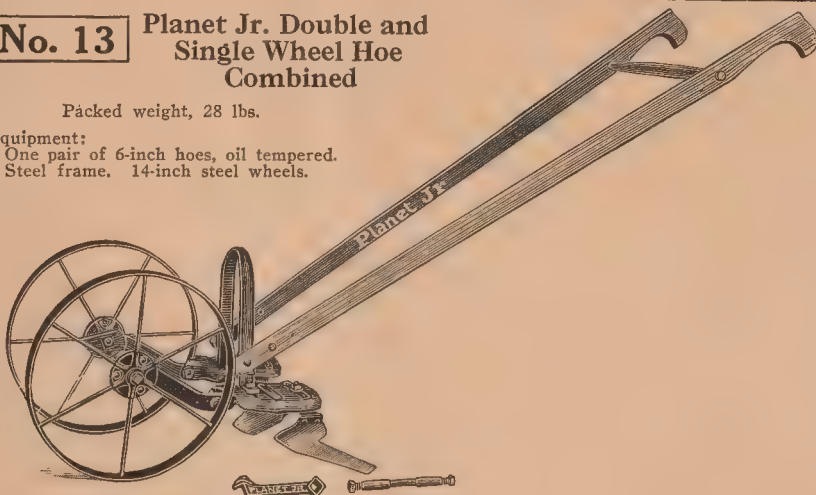


No. 13 Planet Jr. Double and Single Wheel Hoe Combined

Packed weight, 28 lbs.

Equipment:

One pair of 6-inch hoed, oil tempered.
Steel frame. 14-inch steel wheels.



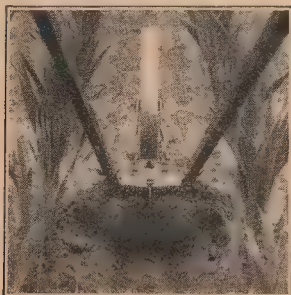
The No. 13 Wheel Hoe is the same as the No. 11 and 12, but has for equipment only one pair of 6-inch side hoed, the most useful of the cultivating attachments and all that some onion growers and others want.

Many years of practical use have proven our 6-inch hoed to be the most consistent and efficient soil mulchers and weed killers of all attachments now in use. We have, therefore, developed new hoed of improved design, oil tempered, each stamped from a single piece of steel, eliminating any chance of breakage or clogging.

Because of its superior usefulness and design, the No. 13 Single and Double Wheel Hoe is a big seller and its sale increases year by year. All attachments on Page 30 of the catalogue can be used with the No. 13 Single and Double Wheel Hoe.

Disc Hoes:

All farmers and many market gardeners have one or more Disc Harrows; so there is no question but that market gardeners in general and smaller gardeners appreciate a Disc Cultivator for hand use. The arrangement as shown on the Double Wheel Hoe permits you to cultivate and ridge up at the same time. By reversing the disc hoed they will cut away neatly from the row and leave the surface in good condition. They are especially desirable in peat lands and are used to great advantage in light or medium soils. We do not recommend them for hard, stiff land. Also furnished for use with Single Wheel Hoed, and will clean up between rows 12 to 15 inches apart and with a disc removed from each side, narrower rows.



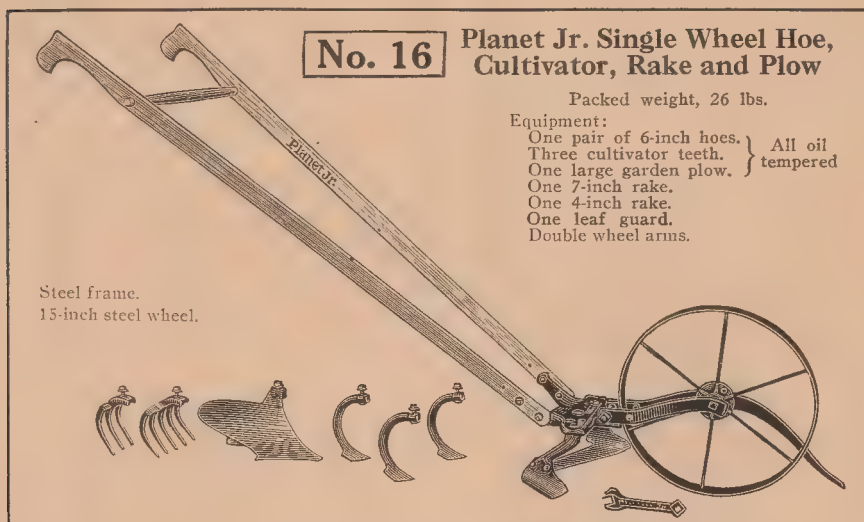
Double Moldboard Plow



Disc Hoes Do Fine Work



SINGLE WHEEL HOES



Single Wheel Hoes

Single wheel hoes are lighter than the double and do almost the same variety of work. They are used mostly between the rows, yet by mounting the wheel on the other side of the arm, Planet Jr. Single Wheel Hoes can be used to hoe both sides at once while the plants are small—the most important time.

Nos. 16, 17, 17½ 18 wheels, frames and handles are alike.

We offer these single-wheel hoes as the highest type of their class. They have many attachments which adapt them to a large variety of work, and there is scarcely any garden culture of which they are not capable.

The steel wheels are particularly well made, with heavy steel spokes, and they run easily and are made up true.

The frame is steel and practically indestructible. The wheel arms and leaf guard are steel also. The handles are adjustable in height.

All our wheel hoe tools are of special pattern, carefully tested by practical men. All the steel parts are high carbon steel, oil tempered, finished and polished and work like a charm.

The plow is of superior design, complete with landside; is large and capable of heavy work. It is generally the first attachment to be used in the spring.



No. 17 Single Wheel Hoe in Flower Garden

SINGLE WHEEL HOES



Hoes. The shield-pointed hoes are the most useful of all the tools. They are finely shaped, neat and narrow, and leave the ground level; are just right for 9-inch rows and up to 14-inch. The hoes are not set opposite each other, thus avoiding gathering trash between them, besides better adapting them to work different width rows.

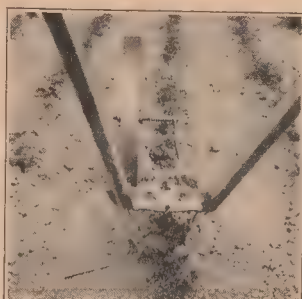
We are now equipping our Wheel Hoes with our new patented hoes S-100 and S-101 in place of the C & D-1. These have been thoroughly tested during the past

season and are pronounced by the users as a decided improvement over the old favorites. See description on page 19.

To get the best results from these hoes and all similar attachments they must be wiped clean after using and frequently sharpened with a file or on the grindstone. Try it and you'll find it pays.



Opening furrow with plow



Hoeing both sides at once

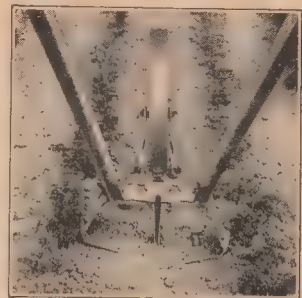
once, while the plants are small by setting the wheel to one side as shown in the cut is a great labor-saving device. The hoes may exchange sides and then throw slightly toward the row. Too much importance cannot be given to the frequent use of the hoes; they not only keep the weeds down but by making a fine mulch on the

surface prevent the evaporation of moisture from the soil below, carrying the plants through exceedingly dry weather.

Hoeing between rows is the chief method of using the Planet Jr. Single Wheel Hoe. Where the rows are more than 12 inches wide, a single cultivator tooth in the center between the hoes makes



3-Prong Cultivator Teeth



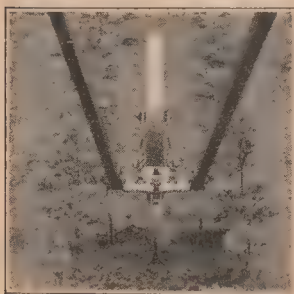
Cultivation in 18-in. rows

admirable work up to 18-inch rows. (See illustration.)

Cultivator Teeth.—A set of three of fine design, adjustable for pitch, do invaluable service in deep culture. A single tooth is excellent for marking out rows for large seeds, for plant settings, etc.

Rakes.—Different widths enable the operator to work many different widths of rows. When the plants first begin to show, cultivate 6-inch rows with the 3-tooth rake and use the 5-tooth for 9- and 10-inch rows. For wider work use two rakes side by side or overlapping. They are just the thing for fining and leveling the ground preparatory to seed planting. The purpose of the garden rake needs little comment as to its usefulness. The rakes may be pushed ahead or may be reversed and the tool drawn backward to cover up foot-prints.

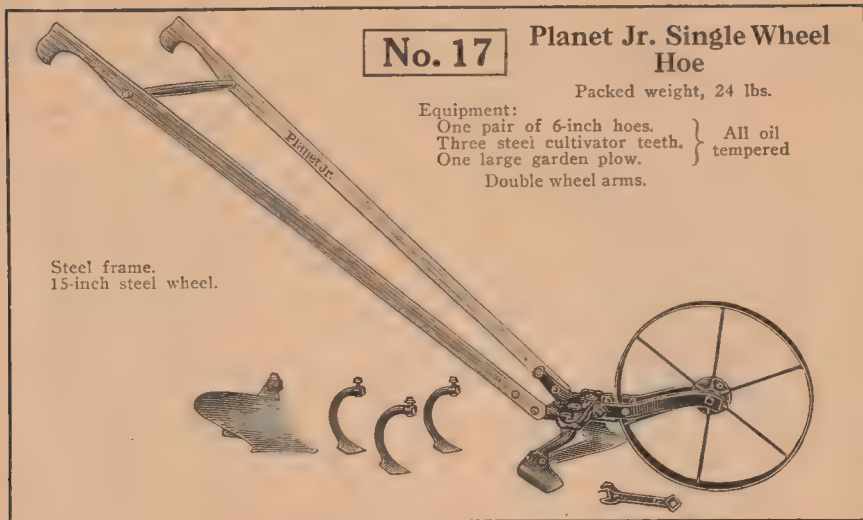
Steel Leaf Guard.—This is indispensable where plants have fallen or been blown over, as peas, strawberries, beets, carrots, etc. It makes easy work close to the crop, with no increase in labor, where otherwise impossible to work at all.



Hoeing two sides and center



SINGLE WHEEL HOES



No. 17

Planet Jr. Single Wheel Hoe

Packed weight, 24 lbs.

Equipment:
One pair of 6-inch hoes. } All oil
Three steel cultivator teeth. } tempered
One large garden plow. }
Double wheel arms.

Steel frame.
15-inch steel wheel.

No. 17 is identical with No. 16, except in equipment, and all that has been said previously regarding Planet Jr. wheel hoes is equally true of No. 17. The three sets of attachments which go with it are all the finest of their kind, and make an outfit sufficient for most garden work. You can do more and better work with it in one day than you can do in several days with the old-fashioned hand hoe.

The hoes exchange sides to work to or from the row, and change of wheel regulates the depth. The hoes are constantly useful throughout the season.

The cultivating teeth are oil tempered and work admirably, are changeable for pitch and are useful for marking out rows.



Planet Jr. Single Wheel Hoes in Onions

SINGLE WHEEL HOES



No. 17 $\frac{1}{2}$

Planet Jr. Single Wheel Hoe

Packed weight, 21 lbs.

Equipment:
 One pair of 6-inch hoes.
 Three steel cultivator teeth. } All oil tempered.
 Double wheel arms.

Steel frame.
15-inch steel wheel.

No. 17 $\frac{1}{2}$ is used very extensively by large growers of sugar beets, onions and other market crops where thorough and rapid work is essential. But we recommend buying the No. 16 or No. 17 machine for the home garden, as they cost but little more and the extra attachments are exceedingly useful; these may be added at any time, but cost more bought separately. Extra attachments described on page 30 will fit this machine.

No. 18

Planet Jr. Single Wheel Hoe

Packed weight, 19 lbs.

Equipment:
 One pair 6-inch hoes, oil tempered.
 Double wheel arms.

Steel frame.
15-inch steel wheel.

The simplest equipment we offer and the cheapest for the work it does. It hoes completely all the space between 12-inch and 14-inch rows, and when the hoes exchange sides the tool may be used as a double wheel hoe until plants are 6 inches high, by putting the wheel on the other side of the arm, and straddling the row.

This machine, with hoes only, will do more valuable work than with any other attachments. All the attachments shown on page 30 fit this tool and can be added at any time.

F. J. VINSON, Roseboro, N. C., writes March 30, 1920: "I would not be without my No. 17 for anything. In fact, I don't see how I could get along without it."

F. W. STORER, Ramsey, N. J., writes May 13, 1920: "I have used your little Fire Fly more than any other of the tools purchased and it is impossible for me to sing its praises in a sufficiently loud tone."

FRANK UPHOLD, R. D. No. 3, Delaware, Ohio, writes June 28, 1920: "I have a No. 17 Planet Jr. Plow and would not take \$25.00 for it, if I could not get another."



SINGLE WHEEL HOES



No. 19

Planet Jr. Garden Plow and Cultivator

Weight, 21 lbs.

15-inch steel wheel.

Equipment:
One 2-inch cultivating tooth.
One 19-inch sweep.
One plow.
One 5-prong cultivating attachment.



No. 19 with Plow; Hilling Potatoes

The No. 19 Garden Plow and Cultivator is a very desirable implement, and is especially designed for the farmers' home garden work, although it offers to every one with either field or garden, a cheap and effective tool for wheel-hoe operations. The standard is slotted for depth regulation, and an adjustable piece carries any of the attachments that go with the machine. The cultivator tooth does deep work and marks out rows for onion sets, plants, etc. The sweep does excellent level shallow work, cutting out the weeds under the surface, and giving effective cultivation.

The plow marks out furrows, covers them up, and plows to or from the crop as wanted; opens furrows for fertilizer, peas, beans, etc. Use the five-prong attachment for both deep and shallow cultivation. It breaks up the ground and leaves a mulch that preserves the moisture in the soil. The variety, shape and quality of the tools make the No. 19 light running and effective. It is strong, well made, and quickly adjusted, the height of the handles being adjustable to suit man, woman, boy or girl.

GARDEN PLOWS



No. 119

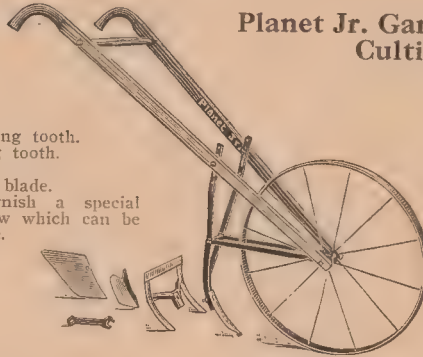
Planet Jr. Garden Plow and Cultivator

Equipment:

- One 1½-inch cultivating tooth.
- One 4-inch cultivating tooth.
- One plow.
- One reversible scuffle blade.

We can also furnish a special double moldboard plow which can be used on this machine.

Weight 16½ lbs.
24-inch Steel Wheel.
1½-inch rim.



The No. 119 Garden high wheel Garden Plow and Cultivator will appeal to those who prefer a high wheel tool for their garden work. Where the soil has not been thoroughly and carefully prepared, the high wheel makes an easy running tool. In many soils it does the necessary plowing. It also opens furrows for seed or fertilizer and covers them on the return trip.

The plow may be used to throw soil to or from the crop during the cultivating season, as well as doing the necessary plowing.

The 4-inch cultivating tooth is very useful for opening furrows, or for hilling and cultivating between the rows, particularly in narrow rows.

The 3-prong cultivator teeth give excellent and thorough cultivation; deep or shallow as you may desire.

The centre tooth of the 3-prong combination may be used for extra deep work. Before sowing the seed, open the furrow with the plow, put in the fertilizer, then use the narrow tooth to loosen the ground to an extra depth and to stir in the fertilizer.

The scuffle blade of the 3-prong

combination is useful in cutting off weeds under the surface, and for shallow cultivation. Leaves a fine mulch to prevent rapid loss of moisture by evaporation.

If you will get one of these you will find how easy it is to keep your ground under perfect cultivation. The work is done in a fraction of the usual time necessary with a hand hoe and this enables you to give your garden many more cultivations in the growing season than ever before. You get a better garden in every way, and with less work.

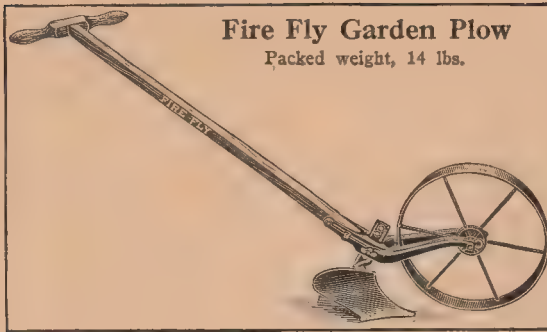
Do not confuse the No. 119 Garden Plow and Cultivator with cheaply constructed high wheel tools of this type. In every way it is up to Planet Jr. quality and will give you many years of service.



100 per cent Better than Hand Hoe—Yet Moderate in Cost



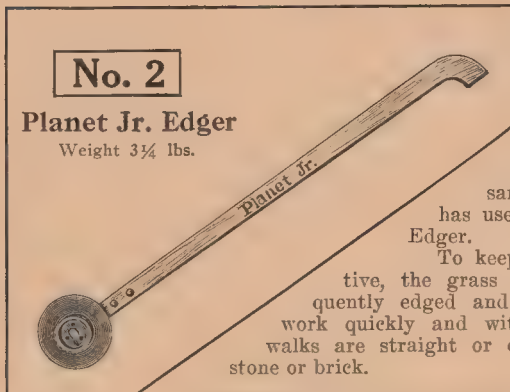
HAND GARDEN TOOLS



Fire Fly Garden Plow

Packed weight, 14 lbs.

This tool is exceedingly useful to owners of small gardens. It will throw a furrow four to six inches wide and one to three inches deep, and deeper by going a second time in each furrow. It opens furrows for manure or seeds and covers them, and opens up rows for all kinds of plant setting. In cultivating, plow away lightly; leave a few days for all weeds to die, and plow back again; nothing more thorough than this. This tool will enable a busy man to do in his spare minutes nearly all the work of a family garden. Chicken raisers find it of great advantage in plowing up their scratching yards.



No. 2

Planet Jr. Edger

Weight 3 1/4 lbs.

This new Edger is lighter and cheaper than the one offered before and will do nearly the same work. Practically everyone who has use for a lawn mower has use for an Edger.

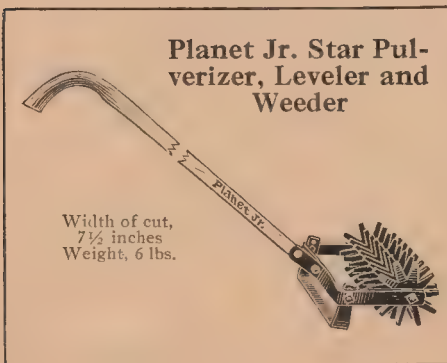
To keep grounds looking neat and attractive, the grass bordering all walks must be frequently edged and the No. 2 machine will do this work quickly and with little effort, no matter if the walks are straight or curved, or if they are of cement, stone or brick.

Planet Jr. Star Pulverizer, Leveler and Weeder

The new style star pulverizers are an improvement over the old style formerly offered.

For the small garden, flower-beds, hardy borders, and for cultivating around trees and shrubbery, this tool with side discs and oscillating blade is found to be a light and easily handled tool. It has a bent handle which permits one to handle it with ease. In cultivating it can be pushed ahead or worked forward and backward. This motion turns weeds upside down and pulverizes the soil.

It is particularly well adapted for cultivation after a rain, when the wheel hoe leaves the ground too lumpy and does not get all the weeds.



Planet Jr. Star Pulverizer, Leveler and Weeder

Width of cut,
7 1/2 inches
Weight, 6 lbs.



Thorough Preparation of the Seed Bed

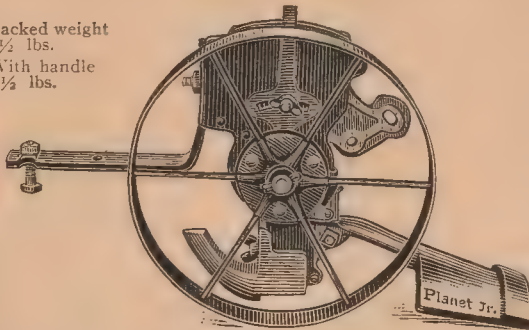
SEEDER ATTACHMENT



No. 35

**Planet Jr. Seeder Attachment for
Wheel Hoes and Garden Plows**

Packed weight
8½ lbs.
With handle
9½ lbs.



Ever since the wheel hoe replaced the hand hoe in the kitchen garden there has been an insistent demand for a small seeder that could be attached to the wheel hoe. The amateur gardener did not always feel justified in buying a complete seed drill, which, while exceedingly useful, was idle a great part of the season and not particularly suited for planting short rows and in small quantities. We are now prepared to furnish the seeding attachment shown here

which can be attached to any Planet Jr. Single or Double Wheel Hoe or Garden Plow, except the Fire Fly Plow.

It is quickly attached by a single bolt and will sow in a continuous row practically any garden seeds—accurately, in straight even rows, at a uniform depth and cover them. This insures not only a minimum of effort when planting but all through the season; a machine planted crop being more readily cultivated and kept free of weeds. Besides, you know what it means to plant seeds by the tedious, back breaking method.

The index contains the names of the principal seeds and the others can readily be gauged according to size. The hopper holds one pint and the last seed can be sown; so you can plant even a small packet without waste.

The hopper casting includes a bracket to which a single handle can be bolted and the attachment used as a complete seeder independently of the wheel hoe or garden plow. A suitable handle can be furnished for this purpose or one can readily be made from a straight piece of wood.

Remember this attachment does not replace our regular line of seeders—it is intended for the small kitchen garden where the rows are usually short—not large enough to warrant the purchase of a complete seeder. It is just as accurate as the larger models and change from one seed to another is made in a few minutes.

Everyone raising his own table vegetables should have this attachment—it is efficient and economical and saves valuable time just when it is needed—the first busy days of Spring.





EXTRAS FOR HAND MACHINES

EXTRAS FOR PLANET JR. HAND MACHINES

Planet Jr. Seeders and Wheel Hoes have been in successful use so many years we get many calls for wearing parts. If anything not named below is wanted send for special repair circular, giving the name and number of the tool.

Hoes, S100 and S101 for cast or steel frames. Supersede C & D1 and C11 & D11. New since 1920 and very well liked. Four sizes, 4½, 6, 7½ and 9 inches.

Peat Land Hoes. Like the S100-101 Hoes, but with extra wide high shields to prevent dirt from falling back and covering the plants. 6-inch cut only.

Cultivator Teeth. No. 1395. Fit combined seeders and double and single wheel hoes.

Narrow Cultivator Teeth. No. 2775. These work particularly well in hard soil.

Plows for Single Wheel Hoes. R3 for cast frames, R6 for steel frames.

Plows for Double Wheel Hoes. M5 and N5 for steel frames. (For cast frames see repair list.)

Double Moldboard Plow. It can be set to furrow wide or narrow, or to hill much or little. Width at widest, 14 in.; narrowest, 10 in. With connecting piece for double wheel hoes and No. 25. (Extra.)

Three-Prong Cultivator Teeth. (See page 19.) For fine, deep work.

Disc Hoes. (See page 21.)

S94. 5-Prong Cultivating Attachment; does fine work—shallow or deep.

Onion Harvester. One size, 8-inch, for onions and onion sets. These make splendid weeders.

Path Cleaners. 12-inch. Do admirable work in parks, cemeteries, etc. Also make excellent hoes.

Rakes made in three sizes: three-tooth, five-tooth and seven-tooth.

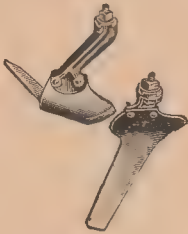
Nos. 1696 and 1697; Two- and four-inch cultivating teeth; indispensable for cultivation in narrow rows, for running seed furrows, etc.

Bent Handles can be furnished for all seeders and wheel hoes if specially ordered from factory.

Wrenches. Don't wait until you are in a pinch for wrenches; always have a supply on hand.

No. H4—Takes ⅜ to ½-inch bolts; No. 3—Takes ¼ to ⅜-inch bolts; No. K48—Takes ¼-inch bolts.

NOTE.—All attachments on this page will fit Planet Jr. Single and Double Wheel Hoes and Combined Seeders and Wheel Hoes, excepting Nos. 19 and 119. The Single and Double Mouldboard Plows and Rakes can also be attached to the No. 19.



S100 & S101 Hoes



S94



Peat Land Hoes



Cultivator Teeth



Narrow Cultivator Teeth



Three-Prong Cultivator Teeth



Rakes



Plow for Single Wheel Hoe



Plows for Double Wheel Hoe



Disc Hoes



Double Moldboard Plow



1696-4 inch



1697-2 inch



Path Cleaner Onion Harvester



PREPARATION AND CARE OF THE VEGETABLE GARDEN

Prepare the Soil. To get good results the soil should be thoroughly drained; if low and wet put in a tile drain; it will pay. Cover the ground with well-rotted barnyard manure, a good covering of sheep manure, or a high-grade commercial fertilizer. This lightens the soil, increasing its power to hold water. Rake in a thin coating of hydrated lime (in fall or spring) on soils that crack when drying. It improves the physical condition of the soil, increases growth and healthfulness of crops.

Dig or plow the ground deeply (8 to 10 inches) without disturbing the subsoil, and have all of this loose ground thoroughly pulverized, then when ready to plant or sow, rake the surface with a Planet Jr. Star Pulverizer or with an iron rake, making it as fine and level as possible.

Preparation of the soil takes time and labor, but pays in the end, as it makes the sowing and cultivating easier and will give you larger and better crops.

Sowing. Radishes, onions, lettuce and other small seeds should be sown very shallow, not over $\frac{1}{2}$ inch deep, larger seeds about 1 inch deep. Peas and beans 1 or 2 inches deep. In dry, hot weather sow and press down the soil 1 inch deeper than in wet weather.

Planting. Set out tomato, pepper, eggplants, etc., as soon as all danger of frost is past. Showery weather is best for this work or late in the afternoon to avoid the effects of the hot sun immediately after planting. Keep the plants thoroughly watered for a few days, and, where possible, keep shaded for two or three days until the plants take root.

Cultivating. The Wheel Hoe should be used if you have a garden 30 x 50 feet or larger. A Single Wheel Hoe for a small garden, a combined Double and Single Wheel Hoe where there is much work to be done. With a Planet Jr. Wheel Hoe you will find the cultivation of your garden easy and pleasant work. With it you will not only do the cultivating quickly and easily, but better than can be done in the old-fashioned way.

Diseases—Insects. There are many of both, and you should be on the lookout for them. At the first sign of trouble, consult your seedsman and he will recommend a preparation to combat it.

See page 32 for Planting Table.

DON'TS FOR GARDENERS

- DON'T** push your Wheel Hoe as you would a lawn mower, but push it with successive strokes from six inches in length for delicate work, to the length of a step in other cases—watch the wheel, not the blades or teeth.
- DON'T** draw the tool back between strokes, as this tends to leave the loose soil in bunches instead of evenly distributed, as it should be to get best results.
- DON'T** wait for the weeds to grow before you cultivate, but keep a dust mulch, which is a thin layer of fine soil on the surface. This checks the evaporation of moisture from the lower soil, and saves you time and trouble in watering.
- DON'T** let the weeds get a start. Small weeds are much easier killed than large ones. Remember you are growing vegetables, and every weed in your garden takes considerable moisture and crop value from the soil.
- DON'T** allow a crust to form nor cracks to open on the surface of the soil. Keep it thoroughly pulverized at all times excepting in wet weather. Cultivate at least once a week, and after rain as soon as the ground is in workable condition.
- DON'T** try to cultivate small garden crops two or three inches deep— $\frac{1}{2}$ or $\frac{3}{4}$ inch will give better results and you will be surprised how much easier your Wheel Hoe will push.
- DON'T** cultivate when the ground is wet. It is never too dry to cultivate. Cultivation keeps the weeds down, allows air and moisture to reach the roots of the growing plants and stimulates their growth. For success—**CULTIVATE**.
- DON'T** allow the hoes to get dull. Keep the edges sharp with a file. You will be able to do better work with less effort.
- DON'T** put away your Wheel Hoe, or any garden tool, without thoroughly cleaning. Keep a rag or piece of burlap handy and when through cultivating, wipe the steels clean. This will prevent rusting and they will do much better work.



THE GARDENER'S GUIDE

The planting time given in the table below should be varied with the latitude. North of Philadelphia plant about one week later for every degree of latitude, south of Philadelphia about one week earlier for each degree.

WHAT TO PLANT:	WHEN TO PLANT:	HOW TO PLANT: Seeds or plants per row of 25 feet	HOW DEEP TO PLANT: (In inches)	HOW FAR APART TO PLANT		WHEN THEY'LL MATURE
				Distance between plants	Distance between rows	(No. days)
Asparagus.....	April.....	25 plants.....	6.....	1 ft.....	3 ft.....	365
Beans, pole.....	May, June.....	$\frac{1}{8}$ pint.....	$\frac{1}{2}$	4 ft.....	4 ft.....	60- 90
Beans, pole lima.....	May.....	$\frac{1}{8}$ pint.....	$\frac{1}{2}$	4 ft.....	4 ft.....	60- 80
Beans, wax.....	May, June.....	$\frac{1}{2}$ pint.....	$\frac{1}{2}$	3 in.....	20 in.....	50- 80
Beans, early.....	Last week April.....	$\frac{1}{2}$ pint.....	$\frac{1}{2}$	3 in.....	18 in.....	45- 60
Beans, bush lima.....	May, June.....	$\frac{1}{2}$ pint.....	$\frac{1}{2}$	12 in.....	24 in.....	60- 90
Beets, early.....	April.....	$\frac{1}{2}$ oz.....	$\frac{1}{2}$	3 in.....	1 ft.....	60- 70
Beets, late.....	May 15 to June 15.....	$\frac{1}{2}$ oz.....	$\frac{1}{2}$	5 in.....	1 $\frac{1}{2}$ ft.....	70- 80
Broccoli, early.....	First week April.....	25 plants.....	.....	1 $\frac{1}{2}$ ft.....	2 ft.....	50- 80
Broccoli, late.....	May, June.....	25 plants.....	.....	1 $\frac{1}{2}$ ft.....	2 ft.....	60- 90
Brussels sprouts.....	May to June 15.....	25 plants.....	.....	1 $\frac{1}{2}$ ft.....	2 ft.....	100-125
Cabbage, early.....	April.....	20 plants.....	.....	1 $\frac{1}{2}$ ft.....	2 ft.....	70-100
Cabbage, late.....	May 15 to June 15.....	20 plants.....	.....	1 $\frac{1}{2}$ ft.....	2 $\frac{1}{2}$ ft.....	100-125
Cauliflower, early.....	April.....	20 plants.....	.....	1 $\frac{1}{2}$ ft.....	2 ft.....	50- 80
Cauliflower, late.....	May 1 to 15.....	18 plants.....	.....	1 $\frac{1}{2}$ ft.....	2 $\frac{1}{2}$ ft.....	100-150
Carrots, early.....	April 15.....	$\frac{1}{4}$ oz.....	$\frac{1}{2}$	3 in.....	1 ft.....	100-120
Carrots, late.....	May, June.....	$\frac{1}{4}$ oz.....	$\frac{1}{2}$	3 in.....	1 ft.....	100-150
Celery.....	April.....	$\frac{1}{4}$ oz.....	$\frac{1}{4}$	6 in.....	2 ft.....	75-120
Corn, early.....	May 1 to 15.....	$\frac{1}{4}$ pint.....	2.....	1 $\frac{1}{2}$ ft.....	3 ft.....	60- 80
Corn, med. & late.....	May 15 to July 15.....	$\frac{1}{4}$ pint.....	2.....	1 $\frac{1}{2}$ ft.....	3 ft.....	60-100
Cucumbers.....	June.....	6 seeds to hill.....	1.....	2 ft.....	4 ft.....	60- 80
Eggplants.....	May.....	14 plants.....	.....	2 ft.....	2 ft.....	40- 60
Endives.....	April and May.....	$\frac{1}{4}$ oz.....	$\frac{1}{2}$	8 in.....	1 ft.....	60- 70
Kohlrabi.....	April.....	$\frac{1}{8}$ oz.....	$\frac{1}{2}$	8 in.....	18 in.....	60- 70
Lettuce, seed.....	Early April.....	$\frac{1}{4}$ oz.....	$\frac{1}{2}$	10 in.....	1 ft.....	60-100
Lettuce, plants.....	May.....	25 plants.....	.....	10 in.....	1 ft.....	40- 80
Lettuce, late.....	June and July.....	$\frac{1}{4}$ oz.....	$\frac{1}{2}$	10 in.....	1 ft.....	60- 80
Leeks.....	April.....	$\frac{1}{4}$ oz.....	$\frac{1}{2}$	3 in.....	12 in.....	100-150
Watermelons.....	May 15 to June 15.....	6 seeds to hill.....	1.....	6 ft.....	6 ft.....	100-120
Muskmelons.....	May 15 to June 15.....	6 seeds to hill.....	1.....	5 ft.....	4 ft.....	90-110
Seed Onions.....	Late April.....	75 sets.....	1.....	3 in.....	1 ft.....	90-125
Onions.....	April.....	$\frac{1}{4}$ oz.....	$\frac{1}{2}$	4 in.....	1 ft.....	90-150
Peas, early.....	Early April.....	$\frac{1}{2}$ pint.....	2.....	$\frac{3}{8}$ in.....	3 ft.....	60- 70
Peas, late.....	May and June.....	$\frac{1}{2}$ pint.....	2-3.....	$\frac{1}{2}$ in.....	3 ft.....	70- 80
Peppers.....	May.....	14 plants.....	.....	.....	2 $\frac{1}{2}$ ft.....	40- 60
Parsnips.....	April.....	$\frac{1}{8}$ oz.....	$\frac{3}{4}$	4 in.....	15 in.....	50- 60
Parsley.....	April to May 15.....	$\frac{1}{4}$ oz.....	$\frac{1}{2}$	4 in.....	1 ft.....	100-125
Pumpkins.....	May to June 15.....	$\frac{1}{8}$ oz.....	1.....	6 ft.....	6 ft.....	100-125
Potatoes.....	April 15.....	$\frac{1}{4}$ peck.....	3.....	12 in.....	2 ft.....	60- 90
Radishes, early.....	Early April.....	$\frac{1}{4}$ oz.....	$\frac{1}{4}$	$\frac{1}{2}$ in.....	10 in.....	25- 40
Radishes, late.....	Up to July 15.....	$\frac{1}{4}$ oz.....	$\frac{1}{4}$	$\frac{1}{2}$ in.....	10 in.....	25- 50
Squash, summer.....	May.....	$\frac{1}{8}$ oz.....	1.....	3 ft.....	4 ft.....	60- 75
Squash, winter.....	May 15 to June 15.....	$\frac{1}{8}$ oz.....	1.....	6 ft.....	5 ft.....	75-100
Salsify.....	April.....	$\frac{1}{2}$ oz.....	$\frac{1}{2}$	3 in.....	18 in.....	100-140
Swiss chard.....	April and May.....	$\frac{1}{2}$ oz.....	$\frac{1}{2}$	8 in.....	18 in.....	50- 60
Romaine.....	Early April.....	$\frac{1}{8}$ oz.....	$\frac{1}{2}$	8 in.....	1 ft.....	40- 60
Tomatoes.....	May.....	12 plants.....	.....	3 ft.....	4 ft.....	50- 60
Turnips, early.....	April.....	$\frac{1}{4}$ oz.....	$\frac{1}{2}$	6 in.....	1 ft.....	60- 75
Turnips, late.....	May to June 15.....	$\frac{1}{4}$ oz.....	$\frac{1}{2}$	6 in.....	1 ft.....	60- 80

ONE HORSE TOOLS

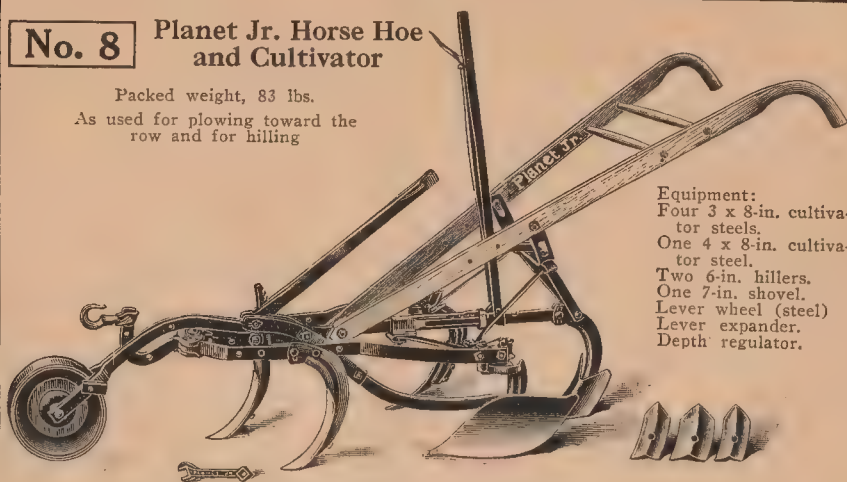


No. 8

Planet Jr. Horse Hoe and Cultivator

Packed weight, 83 lbs.

As used for plowing toward the row and for hilling



Equipment:
Four 3 x 8-in. cultivator steels.
One 4 x 8-in. cultivator steel.
Two 6-in. hillers.
One 7-in. shovel.
Lever wheel (steel)
Lever expander.
Depth regulator.

ONE HORSE IMPLEMENTS

Planet Jr. Horse Hoes are more widely known and bear a higher reputation than any horse hoes ever made. Their first appearance was hailed with delight by thrifty farmers, and they have been held in increasing esteem ever since by those who have learned their strength and other merits, by use. The various tools are the result of a thorough knowledge of both farming and manufacturing, and naturally they have attracted the attention of brother farmers throughout the world. We ask you to study this part of the catalogue well and to write us when in doubt what is best for your purpose.

The new steel gauge wheel, having no spokes, will not clog with cornstalks, stones or other trash, and no sand or dirt can be carried up on the inside of the rim to drop on the bearings. The hub is cheaply renewed when necessary. This wheel fits all Planet Jr. Horse Hoes or Harrows. When ordering extra wheels, specify for which machine wanted, as the arms vary. Cast wheels can be supplied if wanted.

No. 8 Planet Jr. Horse Hoe and Cultivator. This style is a general favorite, being complete and easily operated. The tool is especially strong, being braced so as to make a stiff, unyielding implement intended for long continued service.



No. 8 Planet Jr. Horse Hoe—The Farmer's Friend

The patent frame of stiff steel is extra long and one or two inches higher than usual, and being our patented design, the standards are interchangeable. The No. 8 Horse Hoe and Cultivator closes to 10 inches and opens to 25 inches. The lever expander combines strength and stiffness with simplicity. The play of the ordinary lever expander is largely avoided and the change in width is easy and almost instantaneous. The patent standards are hollow steel, the upper portion inclosing the frame, mutually stiffening it, and being strengthened by it; being steel, they polish in use beautifully. They are high and round in the throat so they will not easily clog. The rear tooth has extra clearance behind the side teeth, preventing clogging and doing excellent work. The teeth are made of beveled steel, especially hardened. (See page 64.) They are thickest in the center (see cut), making them self-sharpening, and the point retains its shape and strength, thus greatly prolonging the life of the steel. Every steel has "Planet Jr." on the back. See that any you purchase are so stamped.



Steel Wheel



Section of Planet Jr. Patent Bevel Steel Cultivator Tooth

for end are invaluable for hoeing. The slanting rounded edge may then be run close to the plants without danger to the roots; when thus reversed they cut away from the row just like a disc.

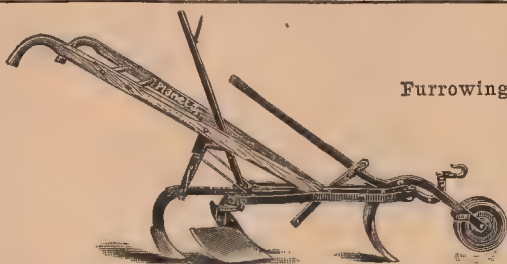
The wheel lever operates the runner which controls the depth and steadies the machine. Adjustment is instant.

The steel hook always stands erect, and is strong and well made.

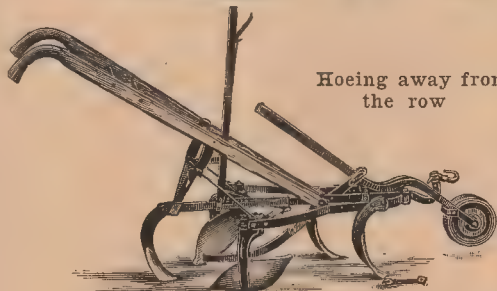
The handle braces are rigid, yet do not interfere with opening and closing or with the side adjustment of the handles.

The handle adjustment is complete. Up or down for height, and an important side adjustment. It holds the handles either central or to one side. Thus in covering, the operator need not walk on the finished work, and in vineyards and among raspberries, blackberries, etc., he may work close to the row without inconvenience from thorns, and in corn cultivation the handles do not tear down the corn.

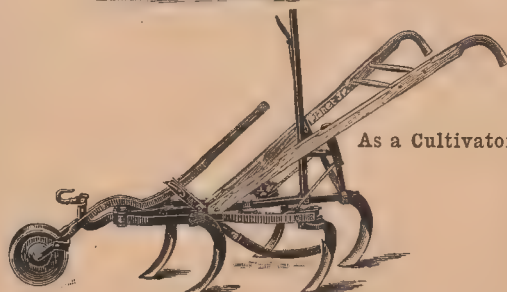
Every owner of a Planet Jr. Horse Hoe will find that it is invaluable in cultivating almost every known crop grown in rows.



Furrowing



Hoeing away from the row



As a Cultivator



Planet Jr.



No. 4 Seeder and Wheel Hoe at Work at a N. J. State Institution

QUALITY becomes more evident in a product as the years go by and it continues to give the same highly satisfactory service as when first purchased. Thousands of farmers, market gardeners and home gardeners from all over the world have voluntarily testified that this is their experience with Planet Jr. Farm and Garden Implements. Once a Planet Jr. user, always one, is the rule; and you will find each of them a Planet Jr. booster, as well.

You will want to know why Planet Jr. Farm and Garden Tools have won so many steadfast and enthusiastic friends.



No. 72 R



Sowing Seed Accurately and Economically with a No. 3 Seeder in a Market Garden



Cultivating Corn in a Young Orchard with a No. 8 Horse Hoe and Cultivator

THOSE WHO KNOW, INSIST
THOSE WHO ARE UNCERTAIN SHOULD
AND DO LIKEWISE, WITH
and many years of steady service at
will prove your judgment in buying
have been good.

Talk over your needs with your
your problems with our Experimental

Leaders



Guiding Cultivator Working Two Rows of Peonies at One Passage, Dreer's Nurseries



SPECIALIZED Tools, designed by men who are successful farmers and gardeners as well as manufacturers, to do their work better and for a longer period than others.

CONSTRUCTED of the best materials and by workmen who through many years of experience in making agricultural implements are specialists in their work; and the

GREAT VARIETY of work that Planet Jr. tools do is an important feature that you will appreciate more and more, the longer you use them.



Doing Rapid and Careful Cultivation with No. 12 Double Wheel Hoes

ON PLANET JR. QUALITY

SHOULD FOLLOW IN THEIR FOOTSTEPS
TO PROFIT TO THEMSELVES;

After the first cost has been forgotten
Quality Farm and Garden Tools to

Get Planet Jr. dealer today or take up
Department; always at your service.



Effective Cultivation in Strawberries with the No. 90 Twelve-Tooth Harrow



Women Enjoy Cultivating Their Gardens with the No. 17 Single Wheel Hoe

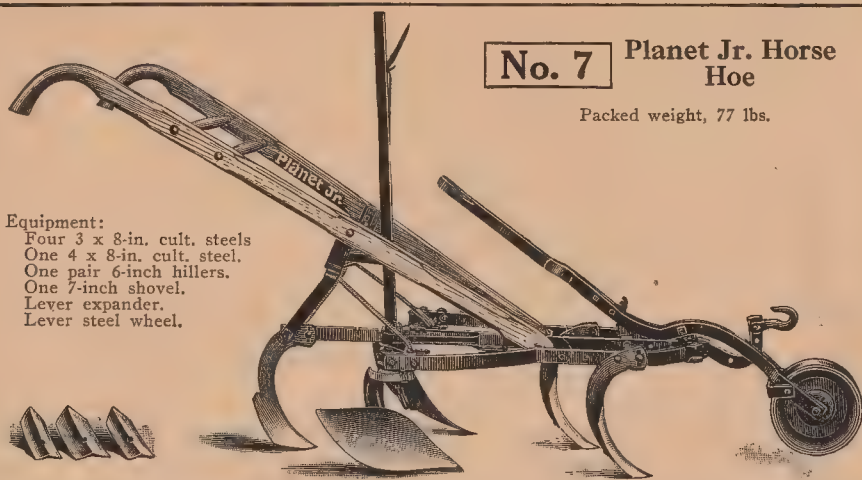


No. 7 Planet Jr. Horse Hoe

Packed weight, 77 lbs.

Equipment:

- Four 3 x 8-in. cult. steels
- One 4 x 8-in. cult. steel.
- One pair 6-inch hillers.
- One 7-inch shovel.
- Lever expander.
- Lever steel wheel.



The cut of the No. 7 Horse Hoe shows the most common and useful of the various forms in which Planet Jr. Horse Hoes may be set up. The small cut (page 34) shows the hillers reversed, when the tool can be used for hoeing a crop closely like a disc. They cut the surface weeds away close to the row, yet do not endanger the roots of the crop, and the rear tooth returns the earth toward the row. The hoe steels and sweeps shown on page 41, as well as the various furrowers and ridgers shown on pages 64, 65, 66, will all fit No. 8 and all our other horse hoes.

The No. 7 Horse Hoe is the No. 8 without the depth regulator. It works the same as No. 8 in every way except that it lacks the steadiness and easy control of depth made possible by the depth regulator.

In using any one horse cultivator, keep the row on your right and turn the horse to the right at the ends of the rows. Easier for both horse and driver. Read description of steels, page 64.



Planet Jr. Horse Hoe in Strawberries in Young Orchard; Seabrook Farms



ONE HORSE TOOLS

No. 9

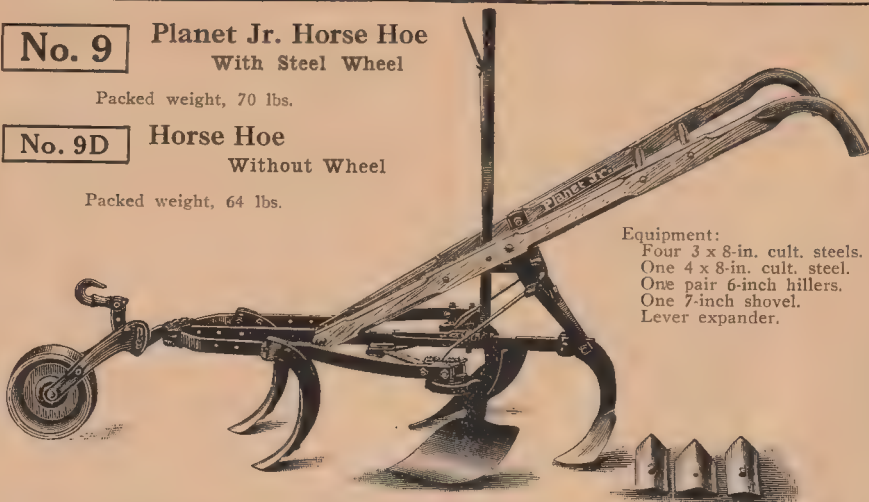
Planet Jr. Horse Hoe With Steel Wheel

Packed weight, 70 lbs.

No. 9D

Horse Hoe Without Wheel

Packed weight, 64 lbs.



No. 9 Horse Hoe is an admirable tool which is identical with No. 7, except that it has a plain wheel instead of the lever wheel.

It has become popular because of its strength, lightness, easy change of width, and perfection of work, and while not so handy as a tool with a lever wheel, it is a favorite. All steels especially hardened and efficient. See page 64.

The handles are adjustable in height and also sidewise, and the equipment as shown in the cut offers a tool which will always be useful.

The Planet Jr. Combined Horse Hoe and Cultivator is in use throughout the civilized world. It is so strongly built as to withstand incredible strain, yet it is easy to handle. One can cultivate to any reasonable depth, and adjust for any useful width. Every part is perfected to make the tool acceptable to the intelligent farmer.

The steel wheel is a great improvement over cast-iron wheels. The tire is pressed into position and electrically welded.

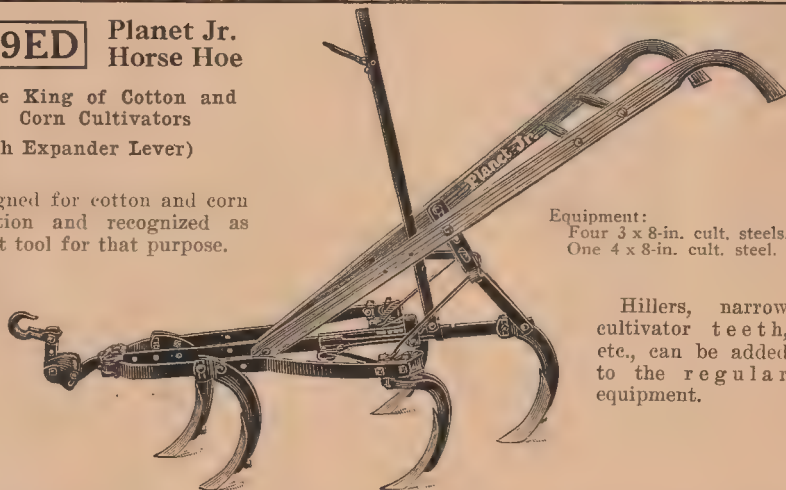
No. 9ED

Planet Jr. Horse Hoe

The King of Cotton and
Corn Cultivators

(With Expander Lever)

Designed for cotton and corn cultivation and recognized as the best tool for that purpose.



No. 9 E D; the horse hoe in demand for cotton cultivation. The third and fourth standards from the front are swivel type, adjustable to any position. Using cultivator teeth, sweeps or turning shovels, they can be adjusted at any angle to throw a furrow to or away from the row.

No. 4

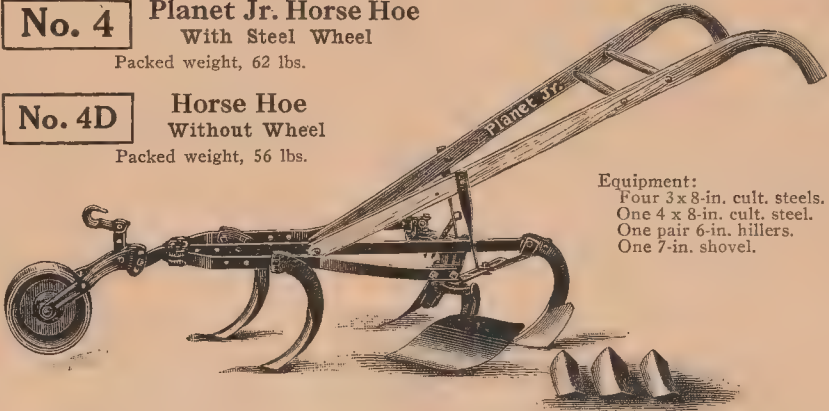
Planet Jr. Horse Hoe
With Steel Wheel

Packed weight, 62 lbs.

No. 4D

Horse Hoe
Without Wheel

Packed weight, 56 lbs.



Equipment:

Four 3 x 8-in. cult. steels.
One 4 x 8-in. cult. steel.
One pair 6-in. hillers.
One 7-in. shovel.

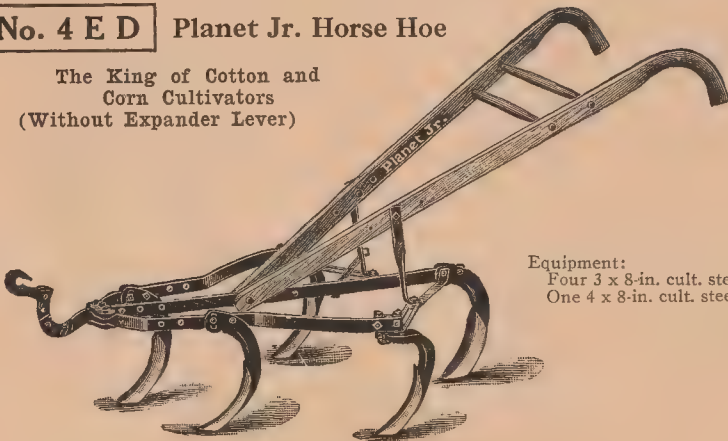
No. 4 Horse Hoe is strong and simple; it has our latest handle braces; very firm, simple, convenient. With them the frame and handles seem almost like one solid piece. Changes in width are quickly made by loosening one nut on each side, and one side may be opened wide, while the other is closed. This tool will carry also a variety of our extras shown on pages 64, 65, 66. The sweeps, the narrow points, and the furrowers are specially hardened. (See page 64.) Every feature is carefully designed and the tool will give complete satisfaction.

The cultivator plates are **full length**, and are made of our special beveled steel; double thick down the center and tapered thin to the edges, making a strong tooth, one that keeps the shape of the point and cutting edges and outlasts any other style.

No. 4 E D

Planet Jr. Horse Hoe

The King of Cotton and
Corn Cultivators
(Without Expander Lever)



Equipment:

Four 3 x 8-in. cult. steels.
One 4 x 8-in. cult. steel.

The **No. 4 E D Horse Hoe** is the Cotton and Corn growers' favorite cultivating tool in many sections. Adjustable swivel standards permit the cultivator teeth, sweeps, or turning shovels on the third and fourth standards to throw a furrow to or away from the row.

The cultivator teeth, sweeps or turning shovels and hillers may be added to the above equipment at any time.

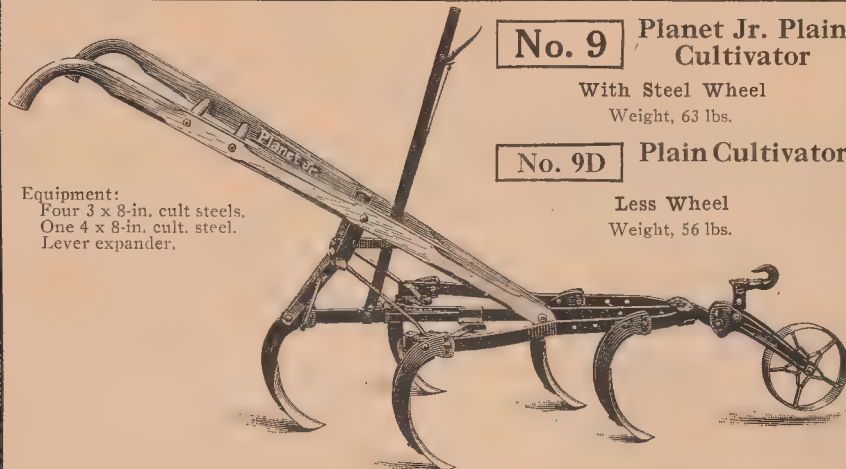


ONE HORSE TOOLS

NOS. 9 AND 4 PLAIN CULTIVATORS

THE FARMERS' FRIENDS FOR SO MANY YEARS

Well built, plain, and of the right design; best cultivators of this class on the market. Long wearing quality makes them cheapest in the long run.

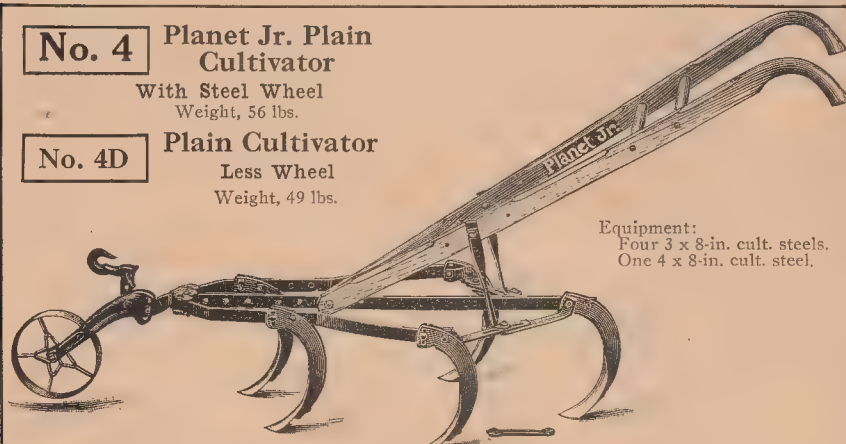


No. 9 Planet Jr. Plain Cultivator
With Steel Wheel
Weight, 63 lbs.

No. 9D Plain Cultivator
Less Wheel
Weight, 56 lbs.

Equipment:
Four 3 x 8-in. cult steels,
One 4 x 8-in. cult. steel.
Lever expander.

No. 9 Plain Cultivator, with patent specially hardened beveled steel teeth (see page 64) which keep sharp and add 50 per cent to the wear, is light yet strong, with steel wheel, hollow steel standards and steel draft hook. At once simple and practical, it is always ready for work year after year.



No. 4 Planet Jr. Plain Cultivator
With Steel Wheel
Weight, 56 lbs.

No. 4D Plain Cultivator
Less Wheel
Weight, 49 lbs.

Equipment:
Four 3 x 8-in. cult. steels.
One 4 x 8-in. cult. steel.

No. 4 Cultivator. This very popular tool is strong, plain, simple, business-like and does its work to perfection. Has extra high, round-throated, hollow steel standards with patent beveled steel teeth, and expanders which make an extra stiff tool, yet allow quick adjustment for width. One side may be closed while the other is left open for special work close to the row. Satisfactory in every respect. An every-day, all-day tool.

W. J. DABNEY IMPLEMENT CO., Atlanta, Ga., writes April 27, 1920: "Send us three small-sized U bolts; these are for a Horse Hoe Cultivator that has been giving perfect satisfaction since 1887."



No. 82

Planet Jr. Seven-Tooth Horse Hoe and Cultivator Combined
With Steel Wheel
Packed weight, 76 lbs.

No. 82D **Seven-Tooth Horse Hoe**
Less Wheel
Packed weight, 69 lbs.

Equipment:
Seven 2 1/4 x 8-in. cult. steels.
One pair 6-in. hillers.
One 7-in. shovel steel.
Lever expander.

The No. 82 Planet Jr. Seven-Tooth Horse Hoe is a new machine which is bound to be popular. It has all the advantages of our No. 9 Horse Hoe; its reversible side standards can be turned to any angle desired. The zig-zag frame is the same as on the seven-tooth cultivator shown below, and the seven teeth insure fine and thorough cultivation. The machine will take all the extra attachments which fit our Nos. 7, 8 and 9 Horse Hoes, and the whole combination is one which is valuable for hoeing, hilling or thorough cultivating.

No. 83 **Planet Jr. Seven-Tooth Plain Cultivator**
With Steel Wheel
Packed weight, 69 lbs.

No. 83D **Plain Cultivator**
Less Wheel
Weight, 62 lbs.

Equipment:
Seven 2 1/4 x 8-in. cult. steels.
Lever expander.

The No. 83 Planet Jr. Seven-Tooth Plain Cultivator. In the opinion of those who ought to know, is the coming one-horse cultivator, as it has seven teeth instead of five. The teeth are 2 1/4 inches wide, and their work is finer and more thorough than that of the five-tooth cultivator.

The machine is a favorite where fine cultivation is wanted. It finishes all rows up to 42 inches apart, and will work the middles complete at one passage. Can be run deep or shallow. Takes all widths of our beveled steel cultivator teeth; also sweeps, furrowers, turning shovels, regular shovels and altaifa steels shown on pages 64, 65, 66. The 5-, 6-, or 7-inch turning shovels do admirable work in corn, beans, potatoes, etc.



ONE HORSE TOOLS

No. 80 Planet Jr. Horse Hoe and Cultivator

With Steel Wheel and Steel Handles

Packed weight, 79 lbs.

No. 80D

Without Wheel

Packed weight, 72 lbs.



All steel.

Equipment:

Four 3 x 8-in. cultivator teeth.

One 4 x 8-in. cultivator tooth.

One pair 6-in. hillers.

One 8-in. shovel.

No. 80 Horse Hoe & Cultivator. An excellent cultivating tool with a capacity for heavy work in rough ground. It is built along the same lines as our No. 4 Horse Hoe, but has a longer frame, and is the strongest implement of its kind in our line. Note the new style steel handles.

It opens to 26 inches and is adapted to complete cultivation of crops in rows up to 3½ feet apart at one passage; going "a round to a row" this Horse Hoe and Cultivator works all width rows up to 4 feet apart, thoroughly and quickly.

The No. 80 Horse Hoe and Cultivator is especially recommended where the ground is rough and extra strength is required.

No. 80

Planet Jr. Plain Cultivator

With Steel Wheel and Steel Handles

Packed Weight, 62 lbs.

Equipment:

Four 3 x 8-in. cultivator teeth.

One 4 x 8-in. cultivator tooth.

This is the same machine as illustrated above but does not have the hilling and shovel steels; and has plain cultivator standard in place of the adjustable side standards. A favorite where a heavier machine than the No. 4 Plain Cultivator is desired.

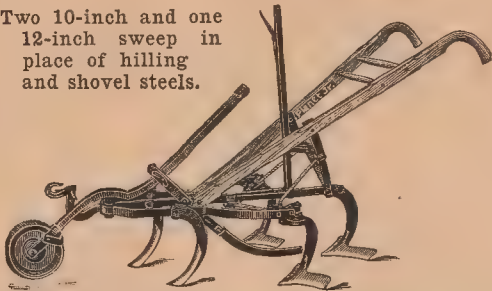


No. 4 ED in Early Cabbage; Norfolk, Va.

ATTACHMENTS—ONE HORSE TOOLS



Two 10-inch and one 12-inch sweep in place of hilling and shovel steels.



cultivators, orchard and beet cultivators. Specially hardened.

Hoe Steels. Made in two sizes, cutting 6 and 10 inches wide. They fit the side standards of Planet Jr. Horse Hoes. A set comprising two 10-inch hoe steels and one 8-inch regular sweep makes a very efficient combination. (See page 66.)

High Hitch Attachment. This can be supplied where

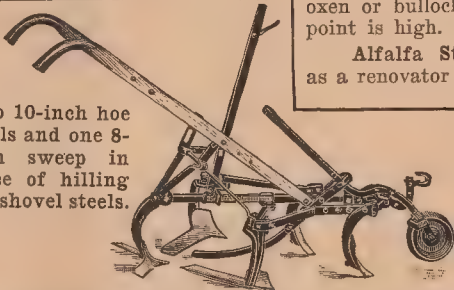
Sweeps. Valuable for shallow work and thistle cutting, etc. Two styles, regular and improved, in varying widths from 3 to 24 inches. Two 10-inch and one 12-inch regular sweeps make a good combination for horse hoes.

Improved Sweeps. (See pages 64 and 65.) Are flatter and the wings set at a sharper angle, making a more penetrating tooth. Especially adapted to one and two horse

Hilling attachment fits Planet Jr. Horse Hoes Nos. 4, 7, 8 and 9. Sold either complete, as shown, or as an attachment.



Two 10-inch hoe steels and one 8-inch sweep in place of hilling and shovel steels.



oxen or bullocks are used or wherever the draft point is high.

Alfalfa Steel. Gives excellent satisfaction as a renovator for alfalfa; also where deep work is wanted or hard ground is to be broken. (See page 65.)

Steel Handles. The new style steel handles shown on No. 80 Horse Hoe on page 40 can be supplied for other Planet Jr. Horse Hoes and Cultivators. Handle-grips are of wood and are very comfortable.



A Planet Jr. Horse Hoe for Every Purpose



ONE HORSE TOOLS

No. 100

Planet Jr. Plain Cultivator

Packed weight, 48 lbs.

No. 100D

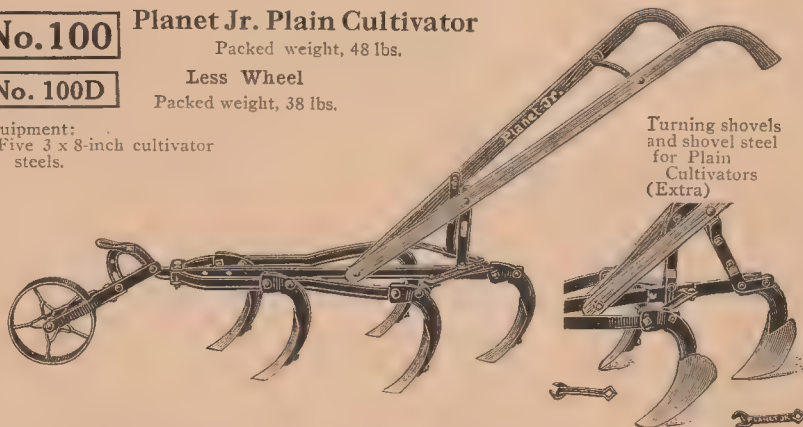
Less Wheel

Packed weight, 38 lbs.

Equipment:

Five 3 x 8-inch cultivator
steels.

Turning shovels
and shovel steel
for Plain
Cultivators
(Extra)



The No. 100-101 Series Planet Jr. Plain Cultivators are particularly designed to give the best possible results in light, sandy soils, such as found in New Jersey, the South Atlantic and the Gulf States, as well as in other parts of the country.

The light weight of these cultivators permits ease in handling, particularly in those sections where it is the practice to lift the cultivator and work on the side of a ridge or close under the leaves of the plants. Its light weight in no way detracts from its strength and wearing qualities.

The No. 100-101 Series is carefully constructed with the best of material and workmanship. There is a big demand for cultivators of this type. To the dealers we say: Tell your customers about the Planet Jr. No. 100 and 101 Cultivators—they want them. To the grower: For a light-weight plain cultivator, a No. 100 or 101 Planet Jr. is your best buy.

Turning Shovels and Shovel Steels for plain cultivators are sold separately. Can be added any time. Turning Shovels are of special shape; useful in connection with rear shovel in throwing furrows and afterwards for covering up, as well as for plowing and hilling as much or little as desired.



No. 100 Horse Hoe Doing Fine Work

ONE HORSE TOOLS



No. 101

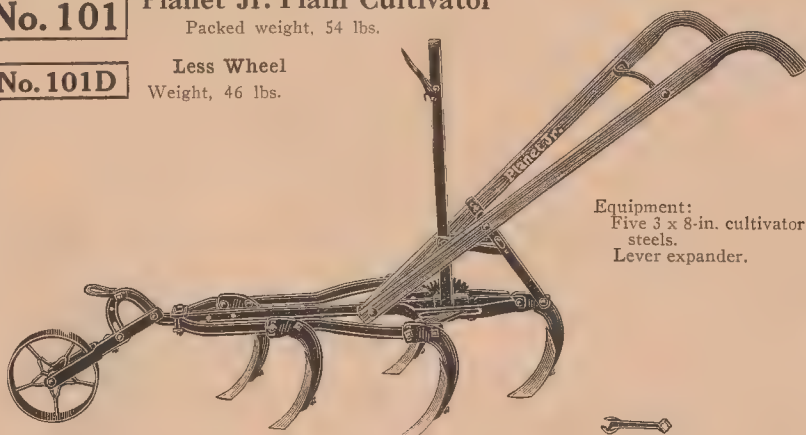
Planet Jr. Plain Cultivator

Packed weight, 54 lbs.

No. 101D

Less Wheel

Weight, 46 lbs.



Equipment:
Five 3 x 8-in. cultivator
steels.
Lever expander.

The No. 101 Planet Jr. Plain Cultivator is the same as the No. 100, but with a lever expander. The lever is all steel, has recently been simplified and improved, and works very easily.

The No. 101 is simple, strong and easily handled and has so few parts there is little danger of it ever getting out of order.

No. 107

Planet Jr. Seven-Tooth Plain Cultivator

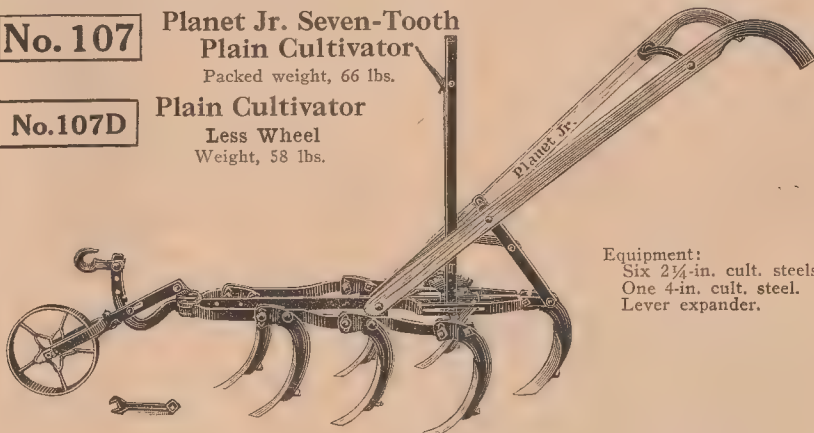
Packed weight, 66 lbs.

No. 107D

Plain Cultivator

Less Wheel

Weight, 58 lbs.



Equipment:
Six 2 1/4-in. cult. steels.
One 4-in. cult. steel.
Lever expander.

The No. 107 Planet Jr. Seven-Tooth Plain Cultivator is very much like the No. 100, but has seven teeth. It does closer and finer work than the 5-tooth. It also does deeper and more thorough work than the 12-tooth harrow. The demand today is for better cultivation, finer, closer work and surer destruction to weeds. The Planet Jr. No. 107 7-tooth

Plain Cultivator is designed to do this better than any other tool on the market, and has been doing so for hundreds of users.

Improved and One-Sided Sweeps and Furrowers can be used on all Planet Jr. Plain Cultivators. (See Pages 64, 65 and 66.)



ONE HORSE TOOLS

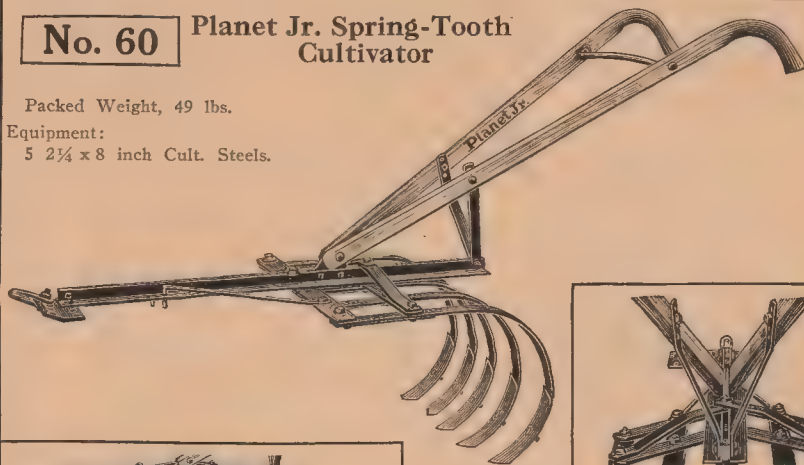
No. 60

Planet Jr. Spring-Tooth Cultivator

Packed Weight, 49 lbs.

Equipment:

5 $2\frac{3}{4}$ x 8 inch Cult. Steels.



Set up as a Side Harrow



As a
V Shaped Cultivator

The No. 60 Spring Tooth Cultivator is a recent addition to the Planet Jr. line of tillage tools. It is made of the same high quality materials and with the same careful workmanship as our other tools. Where a spring tooth cultivator is desirable the merits of this machine are worth considering.

The beam is made of angle steel, light in weight but stiff and strong.

The spring teeth are made of high quality spring steel and are equipped with regular Planet Jr. beveled steels. They are double ended so they can be reversed when worn and are hardened by our special process (see page 64).



Ideal with Teeth and Sweeps for Cotton Cultivation

The clevis is steel and permits side hitching so the horse can walk at the side of the row when straddling the crop. In this work the center tooth can be removed.

The handles are adjustable for height and located so the operator can walk comfortably behind the cultivator without striking his feet against the teeth.

This cultivator is adaptable to a wide variety of work in crops like cotton, corn, potatoes, or any crops planted in rows and is particularly useful in rough ground where there may be rocks and roots. The teeth can be set in a straight line at right angles to the row, as shown in the above illustration; as a Λ shaped cultivator for throwing earth toward the row; as a V shaped cultivator to throw away from the row and as a right or left hand side harrow. The adjustments are easily and quickly made by pushing the outside teeth forward or backward and placing the rods in the proper holes in the forward end of the angle steel beam.

TWELVE-TOOTH HARROW



No. 90

**Planet Jr. Twelve-Tooth Harrow, Cultivator
and Pulverizer**

**Complete (with steel lever wheel
and pulverizer)**

Packed weight, 74 lbs.

No. 90B

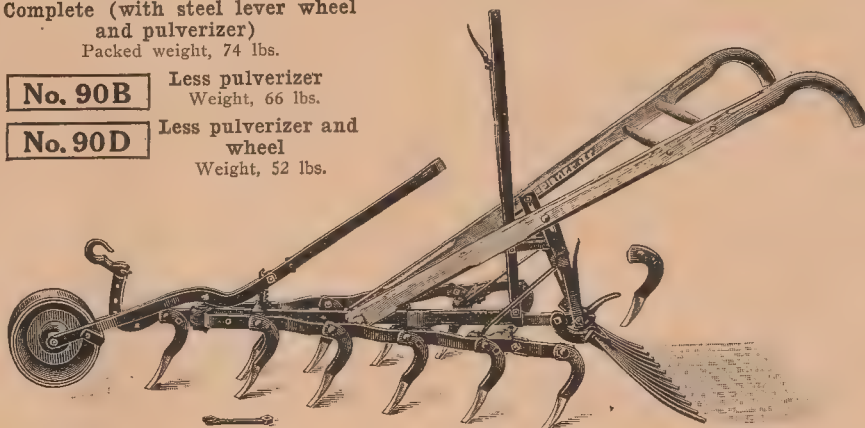
Less pulverizer

Weight, 66 lbs.

No. 90D

**Less pulverizer and
wheel**

Weight, 52 lbs.



This tool has rapidly grown in favor with strawberry, tobacco and sugar-beet growers, market gardeners, truckers and farmers, because the twelve chisel-shaped teeth, specially hardened (see page 64), do such thorough work, and because the tool is so convenient, durable and strong. The teeth and pulverizer leave the ground in the finest condition, and the operator can set the tool exactly to any depth desired, making delicate work not only possible, but easy. Improved braces enable one to change the handles in height to suit boy or man, and also sidewise. It is a great advantage to be able to move the handles to one side when cultivating blackberries, raspberries, vines, hops, etc., saving the hands, the clothes and the crops. The expander works with ease, yet holds the tool thoroughly rigid.

The teeth are $1\frac{1}{4}$ inches wide and wear well, being specially hardened. By using the lower hole the teeth can be set to slant backward. When set in this way it does excellent work in early cultivation, for breaking the crust before the weeds begin to grow or for final preparation of seed beds.

The hand levers regulate both width and depth. The tool expands to 32 inches and contracts to 12 inches.



**Planet Jr. Twelve-Tooth Harrow. A perfect tool for fine cultivation in small fruits
or truck of any kind**



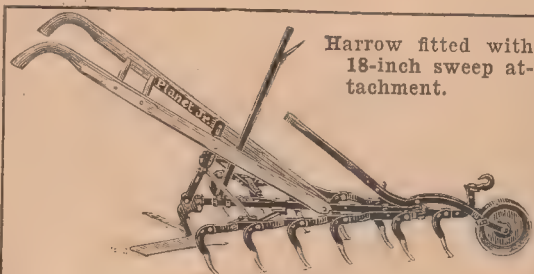
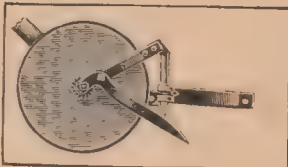
TWELVE-TOOTH HARROW

Strawberry Runner Cutter. This is a 10-inch tempered steel disc mounted on an out-rigger; it fits on either side of our 12-tooth harrow. It has a caster action, is adjustable for depth and sidewise, and has an adjustable leaf guard which lifts the leaves to avoid trimming them off and weakening the plants. It is thoroughly approved by strawberry growers.

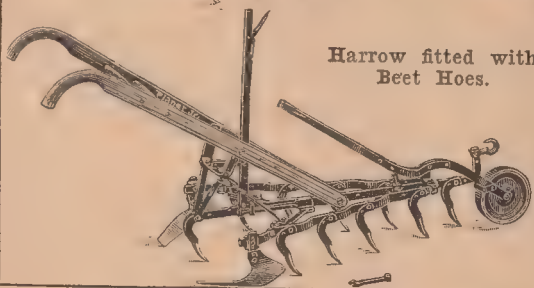
Sweep Attachment. Consists of an 18-inch improved sweep with special standard, used in place of the pulverizer, for leveling and weed cutting. It is adjustable in height, throws a little earth each way, hilling up a trifle; is sure destruction to weeds. We also sell a set of three improved sweeps and standards to go on harrow, one 15-inch and two 10-inch.

Beet hoes are used for hoeing beets and all crops in rows from 15 to 30 inches apart. They do admirable work, leaving the ground level. They work close to the row with a slanting forward rounded cut, and raise the leaves out of danger.

LESTER PICKERING, Clio, Mich., writes: "I decided to purchase No. 90 12-tooth cultivator with attachments. I now have a No. 12 Planet Jr. Double Wheel Hoe, a No. 4 Planet Jr. Seeder, and with the new No. 90 Cultivator. I consider myself the owner of the best to be had. I believe in a pedigree for tools as well as for stock."



Harrow fitted with 18-inch sweep attachment.



Harrow fitted with Beet Hoes.



12-Tooth Harrow; a Favorite among Vegetable and Berry Growers

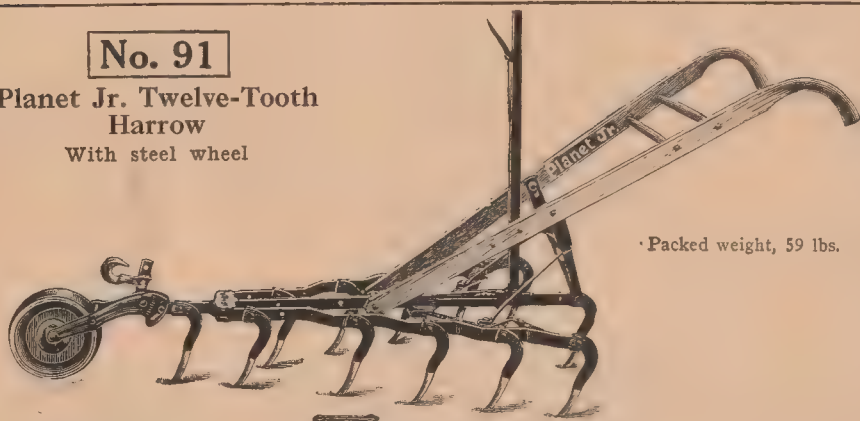
TWELVE-TOOTH HARROW



No. 91

Planet Jr. Twelve-Tooth Harrow

With steel wheel



Packed weight, 59 lbs.

The No. 91 Planet Jr. Twelve-Tooth Harrow gives excellent satisfaction; has the plain wheel without lever. The wheel and arms are substantially made of steel and are adjusted by loosening one bolt.

The strawberry grower finds this tool invaluable, as it works so closely and thoroughly, deep or shallow, without throwing earth on the plants. He uses it to keep the ground loose and clean, and to work up and bed the runners; the round-throated teeth turn them aside without injury, ready to root in the mel-

lowed soil. Farmers and gardeners use the harrow in deep or close cultivation, or when desiring to work a crop thoroughly, but without hilling.

The foot lever pulverizer (see page 45) is an admirable attachment for fine cultivation and preparing ground for the seed drill or for plant setting.

No. 92

Planet Jr. Twelve-Tooth Harrow

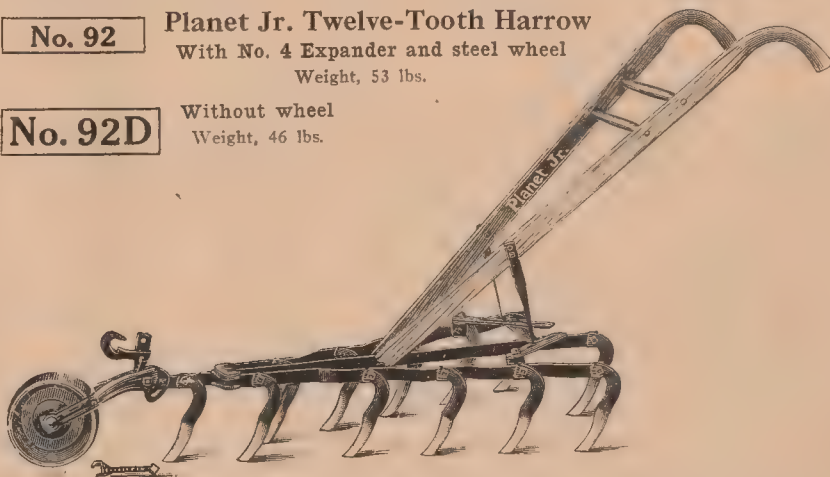
With No. 4 Expander and steel wheel

Weight, 53 lbs.

No. 92D

Without wheel

Weight, 46 lbs.

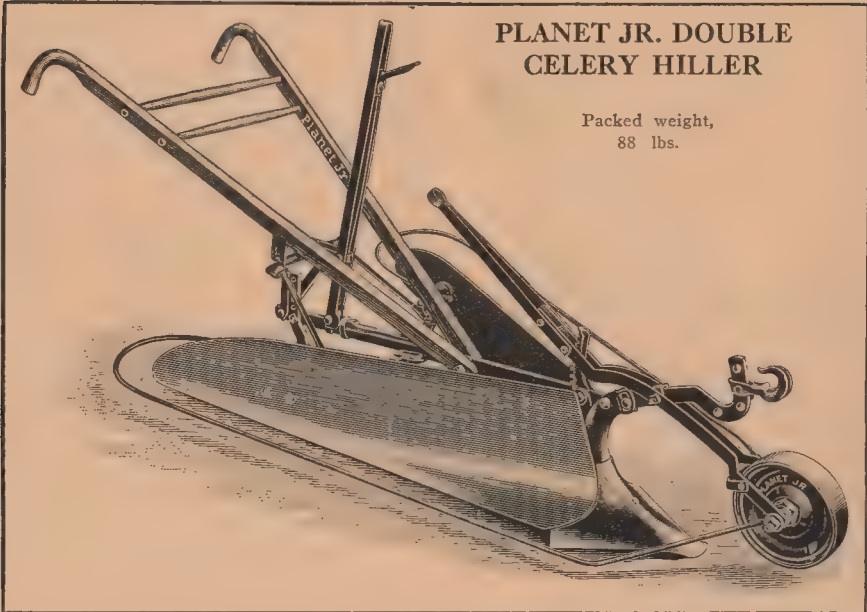


The No. 92D is stiff, strong, simple, easily adjusted, and low in price. One side can be closed while the other is open. A light but effective cultivator for fine work.

HAMILTON DE GRAW, Watervliet, N. Y., writes: "I have your No. 8 and 12-Tooth Cultivators and Wheel Hoes and Fire Fly Plow and drill. The drill I purchased of you most forty years ago. I think it was in 1878 or 1879; somewhere at that time. It has had a few minor repairs and is in commission ready for business when the time comes. Your Planet Jr. goods are the best that I have used."



CELERY HILLER



PLANET JR. DOUBLE CELERY HILLER

Packed weight,
88 lbs.

This tool makes a great saving in growing celery, and is in almost universal use where known. The leaf lifters are adjustable in height to suit the crop by bending slightly, and are especially valuable for early workings. With their aid some of our best and largest growers hill their celery without "handling." We equip it with lever expander, leaf lifters and steel lever wheel. The hilling blades are 43 inches long, adjustable in width or height as wanted; it works all rows up to four feet apart. Before hilling, the soil should be thoroughly loosened with a horse hoe.



Hilling Celery without Handling with a Planet Jr. Double Celery Hiller

ADOLPH SCHILLING, Fort Wayne, Indiana, writes May 26, 1920: "Have used your implements over thirty years and think they are the best to be had."



No. 72 Cultivating Two Rows of Corn in One Passage

TWO HORSE IMPLEMENTS

The annual corn crop is usually about three million bushels. Probably 75 per cent of this corn acreage is cultivated with two-horse implements; over 50 per cent is planted at an average distance apart of $3\frac{1}{2}$ feet. It is very generally planted two rows at once at exact distances apart, each pair of rows carefully planted at a regular distance from the next pair. Again, over four million acres are devoted to the growing of potatoes with a probable yield of over 350,000,000 bushels.

Unquestionably, the **PLANET JR. NO. 72 TWO-ROW CULTIVATOR** is the best tool ever sold for the thorough and economical cultivation of these two important crops and all other crops planted in rows 28 to 44 inches apart. It easily saves its whole cost in one season on fifty acres.

The **Planet Jr. No. 76 One-Row Cultivator** is equally good for one-row cultivation up to four feet apart, the gangs being adjustable instantly by a convenient lever to or from the row without stopping the team, while other handy levers regulate the depth of cultivation front and back.

The **No. 72 Planet Jr. Two-Row** is the highest type of two-horse cultivators. It completes two rows at one passage, all widths from 28 to 44 inches, inclusive, and is specially built to do this when the rows are irregular, for the operator can **change the width apart of gangs while in motion**, to suit varying rows, by means of convenient levers. Important improvements have been made recently. The tongue-lever ratchet and pin are now made of steel, as are also the ratchets and pins of the gang-regulating levers, while adjustable stops make the tool return to the same depth of work automatically after turning at the headlands. $1\frac{1}{4}$ -inch steel axles and the dust-proof pivot bearings are provided with grease cups. Heavy steel balance springs, adjustable, make the handling of the gangs very easy, even when equipped with spring-trip standards.

As a single-row cultivator this tool works rows from 28 inches up to 5 feet.

In listed corn the hinged tongue, adjustable frame and front teeth combine to make this difficult cultivation satisfactory.

In checkrows it surprises everyone. Planted with two-row seeders, the gang working between the rows need not be changed from one end of the row to the other, so that the driver has but one lever to handle. When going crosswise of the rows, he need not change either lever, because the rows are always the same distance apart. Simply use the pivot wheels to steer when necessary. Two rows may be plowed away from and cultivated back again at the same passage; or two rows may be hilled by the plows and finished by the cultivator teeth at one passage.



TWO ROW CULTIVATORS

No. 72

Planet Jr. Two-Row Pivot Wheel Cultivator, Plow, Furrower and Ridger

Equipment:

Fourteen $2\frac{1}{4}$ x 8-in. cultivator
steels.
Two pairs reversible 7-in. plows.
Two 8-inch shovels.
Two pairs plant guards.
Spring lift.

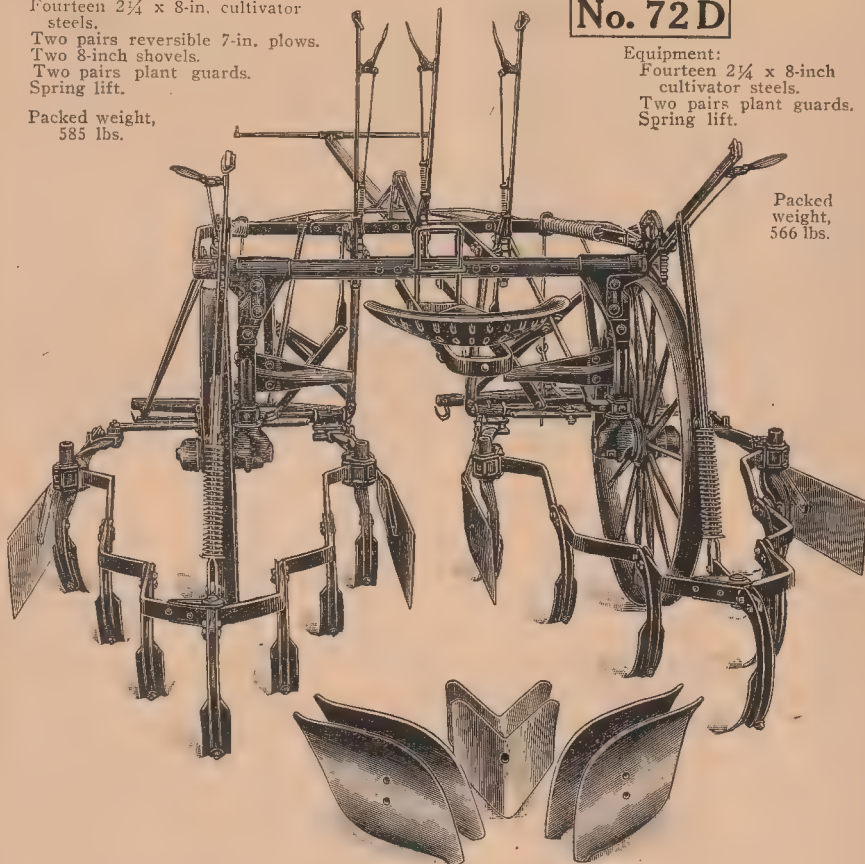
Packed weight,
585 lbs.

No. 72D

Equipment:

Fourteen $2\frac{1}{4}$ x 8-inch
cultivator steels.
Two pairs plant guards.
Spring lift.

Packed
weight,
566 lbs.



No. 72—Continued

The tool has five levers, and they simplify its control so that a boy can operate it with success. The center lever adjusts the hinged tongue regulating the depth of the front teeth and leveling up the machine to suit all heights of neck yoke. The outside levers regulate the depth of the teeth in the rear, while the intermediate levers are used in changing the widths of the gangs to suit irregular planting, without stopping the team. The levers open or close both sides of the frame equally, so that the teeth always work the spaces thoroughly.

The equipment. Seven $2\frac{1}{4}$ -inch x 8-inch reversible high carbon beveled steel teeth of the best design and finish are carried by each frame, so that the work is thorough, even at the width of 44 inches. The four large plows are used in place of the front cultivator teeth to plow to or from the row as desired; they are reversible, giving double wear.

Two wide shovels are useful for marking out two rows at once from 28 to 44 inches apart, or to use for hilling. All steels specially hardened.

The standards are hollow steel, the five rear ones being attached directly to the frame, because they do not need any adjustment except what is provided for by the levers, but the front standards are all adjustable for depth and angle, throwing to or

TWO ROW CULTIVATORS



No. 72. Cultivating and Hilling Tomatoes

No. 72—Continued

from the rows, as desired. All have break-pins unless otherwise ordered. A new spring lift makes the use of the lifting levers very easy.

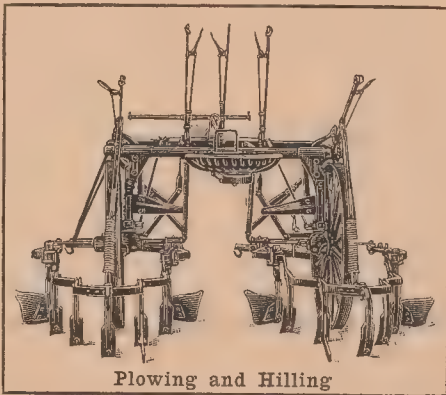
The four adjustable standards take the plows; these are used to plow to and away from the row, and they enable the operator to cover at one passage two rows of manure or potatoes or corn, beans, etc., that have been dropped in the furrow, up to 44 inches apart.

The pivot wheels work quickly and make the cultivation of crooked rows easy. They can be made stationary when desired. They adjust for all width rows, 28 to 44 inches, inclusive. The wheels are heavy, with fourteen spokes each, and guaranteed.

The arch and seat are unusually high, 34 inches in the clear; the seat is adjustable back and forth and in height. A seat spring has been added recently. Very comfortable.

Plant shields. Each tool is furnished with four plant shields that are adjustable in height and swing to clear obstructions. They make close cultivation possible when the plants are small.

Think of the saving made in cultivating perfectly two rows of potatoes, beans or corn, or any crop planted in rows not over 44 inches apart, at a single passage. This means double speed at a single cost, for the arrangement of the fourteen teeth is such that all the ground is well tilled and no open furrows are left next to the row, while one man attends easily to the work, with one team. The tool is especially intended for working crops often and at a moderate depth. For extra deep work or for heavy soil we sell a four-horse hitch. See photo, page 52.



Plowing and Hilling

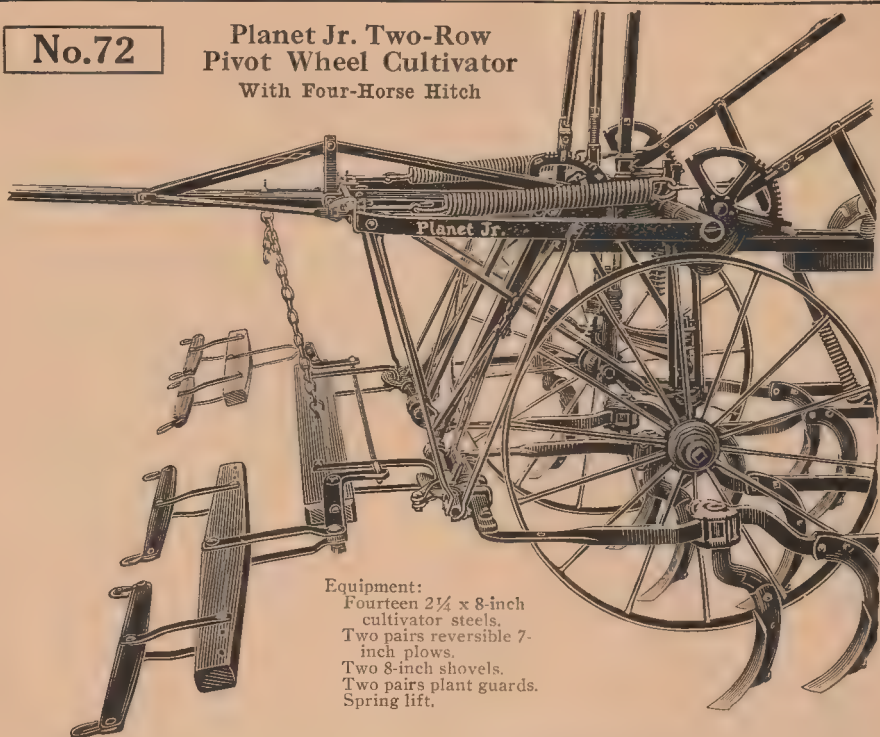
JOHN B. WADLEY, Crownthorpe, Murgon, Queensland, Australia, writes August 26, 1922: "I have used this No. 72 Cultivator for two years on land cleared to ground level and ploughed with a stump jump plow and so far have not had a single breakage. I consider the pivot wheels to be unexcelled."



TWO ROW CULTIVATORS

No. 72

Planet Jr. Two-Row Pivot Wheel Cultivator With Four-Horse Hitch



Equipment:

Fourteen $2\frac{1}{4}$ x 8-inch
cultivator steels,
Two pairs reversible 7-
inch plows.
Two 8-inch shovels.
Two pairs plant guards.
Spring lift.

No. 72 D is used for all crops from beans at 28 inches to corn at 4 feet apart, and in this form with fourteen teeth it does thorough work; though for 28-inch to 34-inch rows five teeth on a side are sufficient. The spring tooth weeder shown and described on page 57 can be attached between the two gangs and makes a very satisfactory weeder for early cultivations.

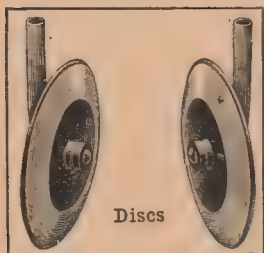
EXTRA ATTACHMENTS

Discs, spring trips, sweeps, hoe steels, furrowing steels, described on pages 64, 65, 66 fit this machine. All steels specially hardened.

Spring trips for Nos. 72 or 76 Riding Cultivators (see page 53) are sold as an extra, or in place of solid standards. In ordering specify for what machine wanted.

Discs as an extra may be used as plant guards and at the same time take the place of the front teeth. Two sizes, 12- and 14-inch.

Four-Horse Hitch. This is satisfactory until corn is $3\frac{1}{2}$ feet high. We offer it complete with four single-trees; or with heavy 88-inch evener, two 44-inch doubletrees and two extra single-trees only; or with evener only, with connections.

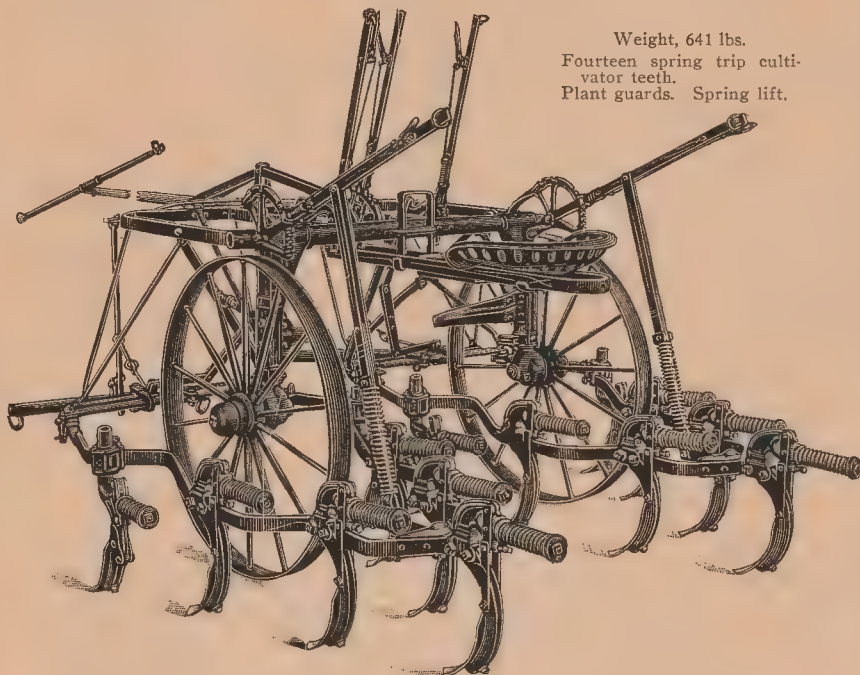


TWO ROW CULTIVATORS



No. 72G

Two-Row Cultivator equipped with Spring Trip Standards



Weight, 641 lbs.

Fourteen spring trip cultivator teeth.

Plant guards. Spring lift.

Where soil is stony, rough, stumpy or rooty it is often difficult to use a machine equipped with solid standards without too many stops to replace break pins; so the demand is insistent for the best device to obviate this annoyance. We have improved the Planet Jr. Spring Trips by increasing the strength of compression springs, and we can recommend them as just what is needed. They save a great deal of time and will come into more general use as their merits are appreciated.

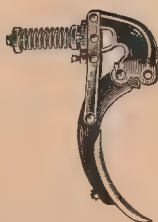
The illustrations show their construction. The new spring lift makes the handling of the extra heavy gangs easy.

NOTE.—We would be glad to have users of Planet Jr. No. 72 Two-Row Cultivators consult us by letter when having special work for them.

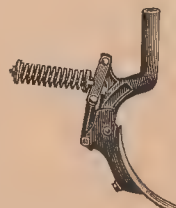
The tool takes such a variety of discs, plows, furrowers, etc., that we could advise as to the best equipment.

For hilling and plowing the last time, the plows followed by cultivator teeth give fine results.

For shallow surface work, two pairs 10-inch hoe steels (with special standards) and ten sweeps make a fine mulch.



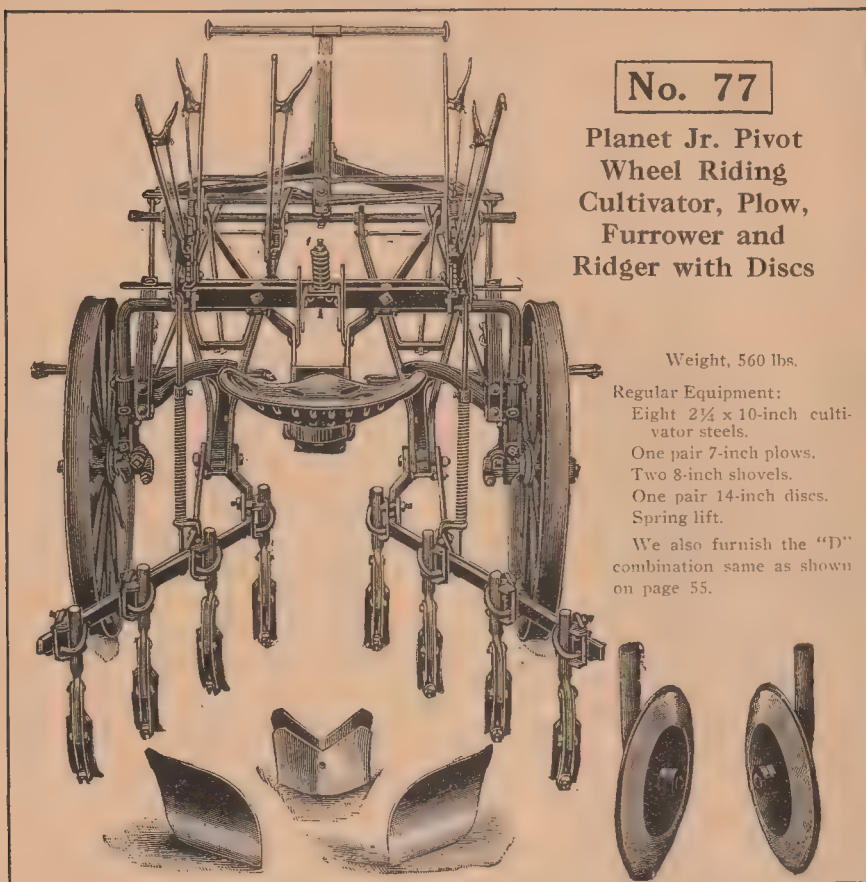
**Fits No. 76 and No. 77
Cultivators and front
teeth of No. 72**



**Fits No. 72
Cultivator**



TWO HORSE CULTIVATORS



No. 77

**Planet Jr. Pivot
Wheel Riding
Cultivator, Plow,
Furrower and
Ridger with Discs**

Weight, 560 lbs.

Regular Equipment:

Eight $2\frac{1}{4}$ x 10-inch cultivator steels.

One pair 7-inch plows.

Two 8-inch shovels.

One pair 14-inch discs.

Spring lift.

We also furnish the "D" combination same as shown on page 55.

Why do modern farmers buy riding cultivators? Easier and quicker cultivation—and a saving in labor. With the riding cultivators you get frequent, thorough cultivation. The work is done in less time and your help is better satisfied.

The development of the new Planet Jr. No. 77 Pivot Wheel Riding Cultivator is the result of a quarter century of designing, manufacturing and practical experience. We believe we have eliminated all possible objections there may be to other two-horse cultivators, including our own, and have added every good feature that has been suggested to us, and which we have developed from experience.

One of the most important features is the design of the frame which gives a clear view of the row being cultivated, there being no levers or ratchets in the line of sight.

The gangs are raised by powerful springs, and so arranged that the operator does not pull back against the team when raising them. Each gang is provided with separate levers for changing

the pitch of the teeth in front. With this arrangement each gang can be adjusted independently, which is a necessity for side hill work.

The distance between the gangs is changed by moving a single lever and can be done while in motion.

The pivot wheels are adjustable for rows from 28 to 48 inches apart. They are easily guided by the foot levers.

The cultivator balances perfectly; the front end of the tongue just balances when at work, so all neck weight is eliminated.

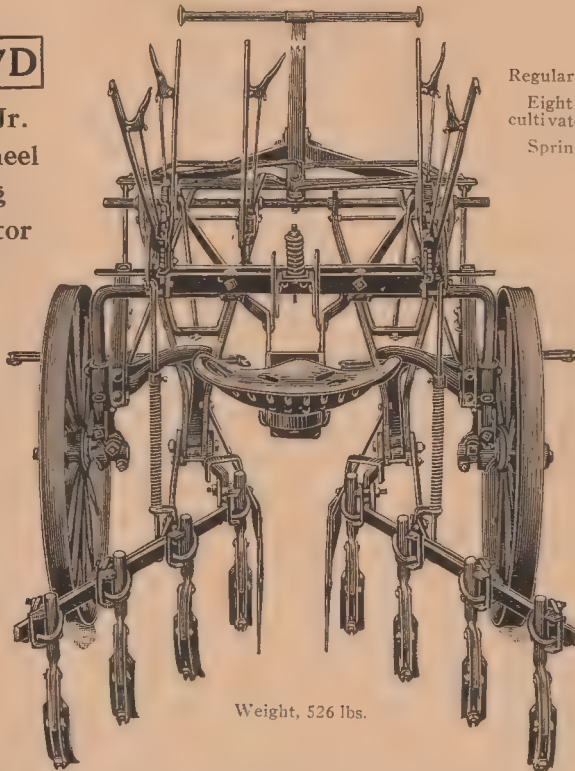
There is a clearance of $32\frac{1}{2}$ inches under the frame permitting cultivation of corn until four to five feet high. It is made almost entirely of steel and will last a life time. Send for special circular giving other improvements.

TWO HORSE CULTIVATORS



No. 77D

**Planet Jr.
Pivot Wheel
Riding
Cultivator**

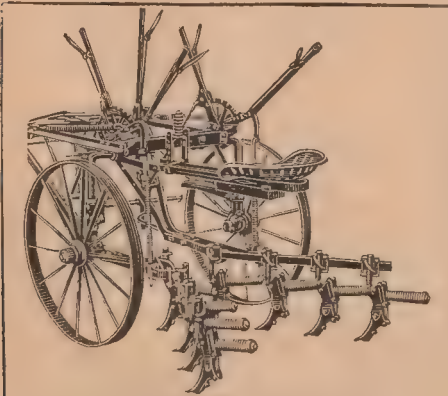


Regular Equipment:
Eight 2¼ x 10-inch
cultivator steels.
Spring lift.

Weight, 526 lbs.

The No. 77-D Cultivator is the same as the No. 77, except that it has for equipment, only the 8—2½ x 10-inch cultivator steels and spring lift. Any other equipment shown with the regular No. 77 or shown on pages 64, 65 and 66, can be added at any time.

The No. 77 Two-Horse Cultivator is shown below with **spring trip standards**. The increased demand for spring trips is such that we are offering the No. 77 equipped with them as a separate machine. Experience tells us that a stone as large as a man's fist, imbedded in clay when it is thoroughly dry, is sufficient to cut off a break pin. Those who have profited by this experience prefer to pay the difference in the cost of the spring trip to take care of itself.



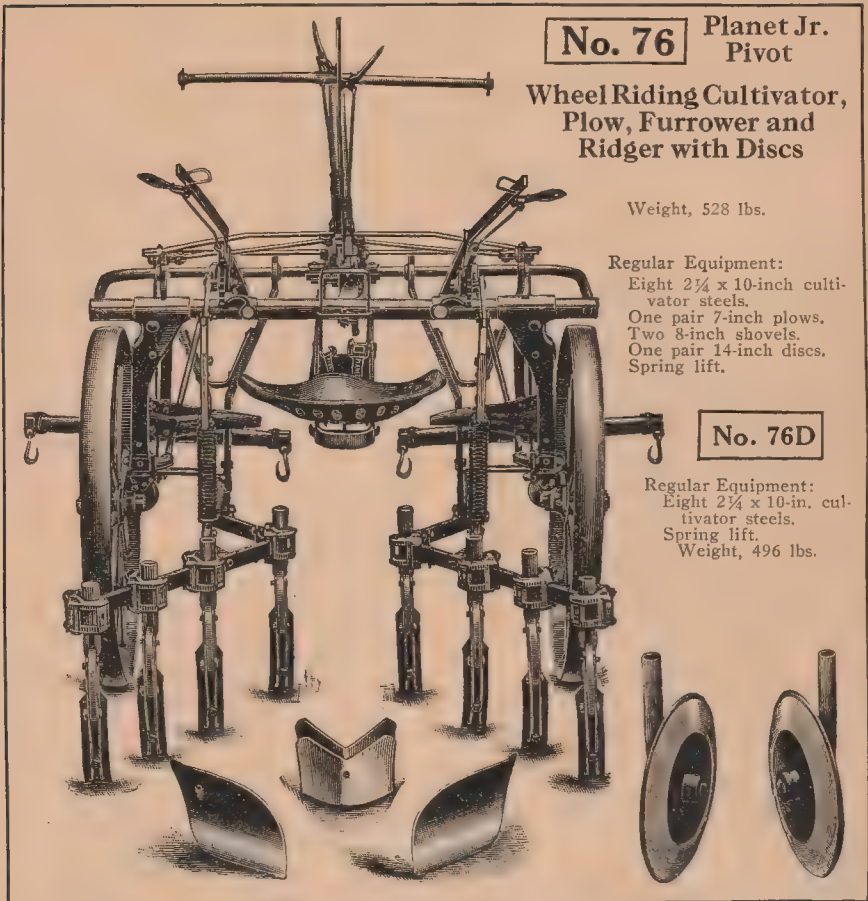
No. 77G: Spring Trip Standards

No. 77 G—with Spring Trip Standards. Packed weight, 544 lbs.

Satisfactory spring trip standards are, of necessity, heavier than plain ones, but the new spring lift makes the raising of gangs easy, and the No. 77 with spring trip standards is handled easily and has proven to be the best cultivator that hundreds of our users have ever operated.



TWO HORSE CULTIVATORS



No. 76

**Planet Jr.
Pivot**

**Wheel Riding Cultivator,
Plow, Furrower and
Ridger with Discs**

Weight, 528 lbs.

Regular Equipment:

Eight $2\frac{1}{4}$ x 10-inch cultivator steels.
One pair 7-inch plows.
Two 8-inch shovels.
One pair 14-inch discs.
Spring lift.

No. 76D

Regular Equipment:

Eight $2\frac{1}{4}$ x 10-in. cultivator steels.
Spring lift.
Weight, 496 lbs.

The **No. 76** is a comparatively new implement which combines in itself nearly all the practical advantages possible in one tool, and is a grand tool for every farmer who cultivates anywhere from ten to hundreds of acres.

The extra wide arch is 34 inches high and will work corn safely up to four feet.

The frame and tongue are steel.

The pivot wheels change in width easily, to suit all rows from 28 to 48 inches, and they make guiding a pleasure.

The gang frames are extra heavy, but improved levers with lifting and depth-



Quick, effective cultivation on large acreage

TWO ROW CULTIVATORS



No. 76 Continued

regulating springs make their perfect control easy.

Each standard is made with two holes in the lower end so that as the cultivator steels wear down they may be let down for further use.

The draft control is such as to insure satisfactory work in all conditions of soil.

Adjustable stops regulate the depth so that the tool, after turning at the ends of the rows, goes to work automatically at the exact depth it was set before.

New features are malleable pivots and steel axles, both practically dust-proof; and steel ratchets and pins. A very comfortable spring seat is added. It is large and comfortable, adjustable up and down, back and forward.

The discs can be set to throw either to or from the row. When used to throw away they act as plant shields.



The new levers and springs regulate the depth and pressure of the teeth. The central lever operates the hinged tongue regulating the depth of the front teeth and leveling the machine; the same lever moves the teeth instantly, either closer to or further from the row, as desired, while the team is in motion.

All parts are steel except a small percentage of malleable iron.

All teeth are specially hardened. (See page 64.)

Improved spring lifting levers make control of the gangs rapid and easy.

The tool works rows from 28 to 48 inches apart, cultivating, plowing or hilling.

It marks out rows from 24 to 48 inches apart, two at once, and with the plows will cover or make up drills ready for seed sowing or for planting. This cultivator is simple, roomy, strong and easily handled. Every part is made of the best material in the best manner, and is of the finest quality, design and finish.

The Spring Tooth Weeder here illustrated is a valuable but inexpensive attachment for either the No. 76 or No. 77 Pivot Wheel Cultivator. It can be attached in the center of either of these machines, and is very useful for the first cultivations of corn, potatoes, etc. This eliminates the need for a separate weeder and a separate operation; the cultivating, weeding and pulverizing in the row being done at one time. Extra parts needed for No. 72.

We can furnish a tobacco hoe attachment for working tobacco, cabbage, tomatoes, peppers and plants that are set from two to four feet apart in the row. The operator not only hoes the sides of the row, but also between the plants; the work being in open sight. Includes an extra seat so that a boy may drive while the operator does the hoeing.

No. 76 "D" is the same as No. 76 except that it has for equipment only eight cultivator steels and one pair of plant shields. This is the simplest combination and additional attachments may be added whenever desirable.

No. 76 "G"—With Spring Trip Standards. The increasing demand for spring trips is such that we now offer No. 76 equipped with them as a separate machine. Some of our customers say that a stone as large as a man's fist, imbedded in clay when it is fairly dry, is sufficient obstruction to cut off a break-pin, and that they prefer to pay the difference in the cost for the spring trip which takes care of itself.

Satisfactory spring trip standards are, of necessity, heavier than plain ones, but the new spring lift makes the raising of gangs easy.

VIRGINIA AGRICULTURAL EXPER. STATION, Blacksburg, Va.: "We have found your No. 76 Cultivator to be a splendid implement."

PRINCETON NURSERIES, Princeton, N. J., June 11, 1921: "The Hightstown Hardware Company brought over your new style No. 77 Two-Horse Cultivator for us to try out, with the idea of offering suggestions or improvements. We used the machine about three days and would like to congratulate you on its mechanical and practical perfection. It is absolutely the best cultivator that we have ever used. Not only is it light and easy to handle, but it steers half as easy again as the old No. 76 which has been the best cultivator that we could find up to the present."



No. 41 Universal Cultivator in Vineyard

THE PLANET JR. ORCHARD AND FALLOW LAND CULTIVATORS

The Planet Jr. Orchard and Universal Cultivators are very light draft for the work they do. The draft when at work is exactly in proportion to depth of work. No tool works harder for the amount done than a disc, and next hardest is a spring tooth. No spring tooth will run as light as the Planet Jr. when working at the same depth.

Planet Jr. Orchard Cultivators are very popular for cultivation of orchards, vineyards, hopyards and for fallow land work. They are also used for working and hilling crops when not over two feet high, such as beans, potatoes, etc., doing two or three rows at one passage; also for making irrigation furrows. They cultivate much more thoroughly than the disc harrow and kill weeds better. The teeth are reversible, self-sharpening and specially hardened. Sweeps of all widths can be used for level cultivation, furrowers for marking out or hilling rows from two to five feet apart, and plows for covering two or three rows at once. They do work superior to the disc harrow, except in trashy ground, often doing twice as much at one passage with the same draft. Disc attachments can be supplied if wanted and with them one has an excellent combined cultivator and disc harrow. For deep fallow work or alfalfa cultivation four horses may be used without injuring the tool.

MR. SAM C. WHITAKER, R. F. D. No. 8, Jackson, Tenn., writes June 24, 1917: "I am well pleased with the results I have been getting with your implements, and, as they are new to this community, I have taken pleasure in demonstrating them to 'the old-timers,' which means business for you." I recently loaned my cultivator, with the 18-inch sweep attached, to an old and experienced orchardist and berry grower, and he says it is the best tool he ever had in his berries, and he has been in the business for fifty years."

S. R. ELWELL, Charleston, S. C., writes May 19, 1920: "Nobody could appreciate your tools more than I. I have used them for over thirty years in England, Western Canada, and South Carolina, and I would never be without them at any time."

J. ECKERT STABLEIN, Las Cruces, N. Mex., writes May 4, 1920: "Your implements are proving to be one of the best labor and money saving devices I have ever had. I am using them altogether on my market garden, which I am operating as a side line to my regular profession."

ORCHARD CULTIVATORS



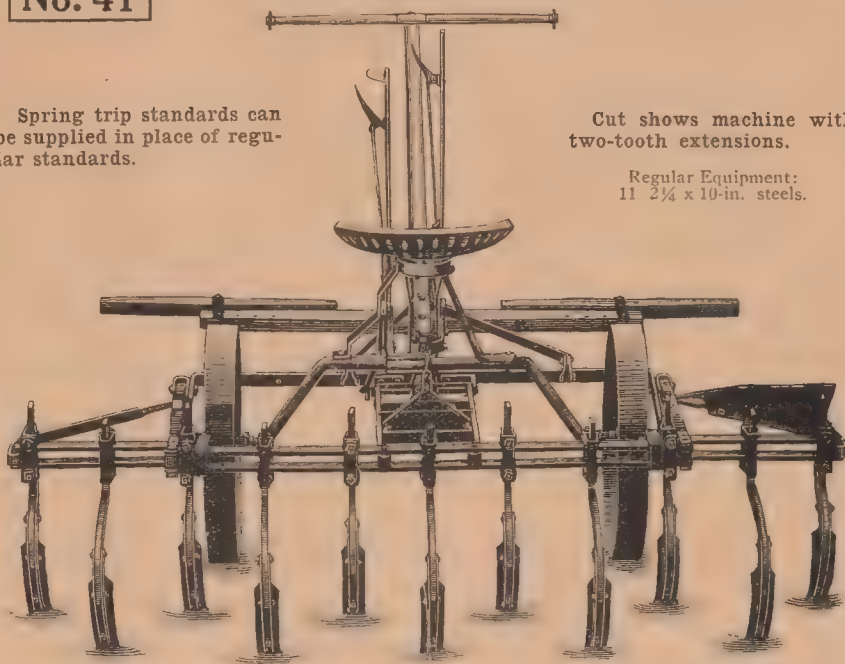
No. 41

Planet Jr. Orchard and Universal Cultivator

Spring trip standards can be supplied in place of regular standards.

Cut shows machine with two-tooth extensions.

Regular Equipment:
11 2¼ x 10-in. steels.



No. 41

With two-tooth extensions.....6 ft. 6 in.

Packed
Weight
483 lbs.

No. 41B

With one-tooth extensions.....5 ft. 3 in.

403 lbs.

No. 41D

Without extensions.....4 ft.

376 lbs.

No. 41 Planet Jr. Orchard and Universal Cultivator is built to combine strength, lightness, adjustability and efficiency to the fullest extent in one tool, representing in itself the advantages of our earlier patterns, combined with important improvements.

The steel wheels are low and entirely enclosed by the frame; are 40 inches apart.

The tongue is steel, hollow and of rectangular section; very strong.

The frame is high carbon steel, compact in form, well braced, heavy and strong.

Without the extensions it cuts 4 feet in width and has seven stiff steel standards, carrying 2¼ x 10-inch beveled steels, specially hardened.

With the extensions it cuts 6 feet 6 inches, carrying eleven teeth, and the frame can be changed to cut any width from 6½ down to 4 feet in width.

The Teeth. The regular equipment is 2¼ x 10-inch reversible steels, but other widths and sweeps, furrowers, irrigation steels, alfalfa steels and hoc steels can be used on this tool.

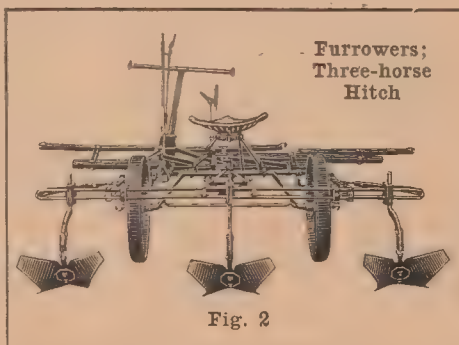
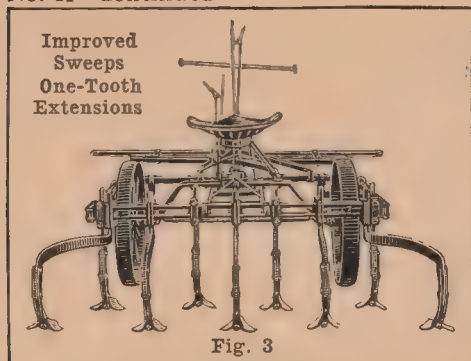


Fig. 2



ORCHARD CULTIVATORS

No. 41—Continued



tree evener and singletree (Fig. 2). The tool then works admirably with no side draft.

Improved Sweeps. Made to cut 3, 5, 8, 10, 12, 15, 18 or 24 inches wide. Fig. 3 shows 5-inch sweeps which are excellent for level work and dry countries. Ten-inch are death to Canada thistles; $2\frac{1}{4}$ -inch teeth in front and 10- or 12-inch sweeps in rear also make an excellent combination.

Furrowers. Useful on this cultivator. See Fig. 2.

Spring Trip Standards. We can supply these for orchard cultivators.

Irrigation Steels.

Discs. We supply a set of 10 discs and special standards as an extra.

Fore Carriage. In response to a demand for a fore carriage or truck, we have made one which fits the No. 41 Cultivator.

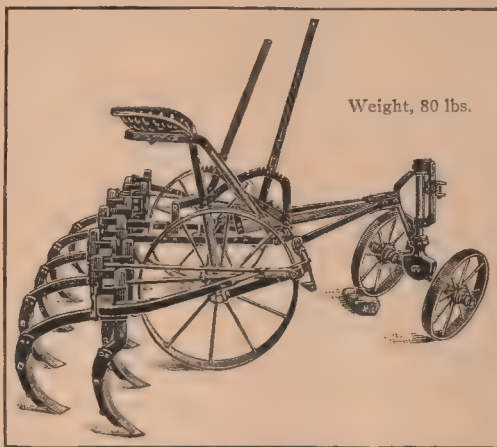
Alfalfa Steels. $1\frac{3}{4} \times 9$ inches. Great for renovating alfalfa and for deep tillage.

The tree and fruit shield is placed on the right-hand side to be used next the tree row to prevent injury to fruit and limbs.

The standards are adjustable up, down and sidewise. Are heavy, high-carbon steel.

Side hitch for two horses. With the tongue set 15 inches to the left (Fig. 3), the tool is arranged for working under low-branching trees for orange and orchard cultivation. This creates some side draft, but that can be largely overcome by setting the teeth shallow next to the trees, and thus saving the roots, as well.

For Three-Horse Hitch. Add to the above tongue arrangement a triple-



Breaking up the Stubble Field with Planet Jr. No. 41 Universal Cultivator. Eastoe Ranch, Launceston, Tasmania

No. 3

Planet Jr. Four-Row Sugar Beet and Bean Horse Hoe and Cultivator

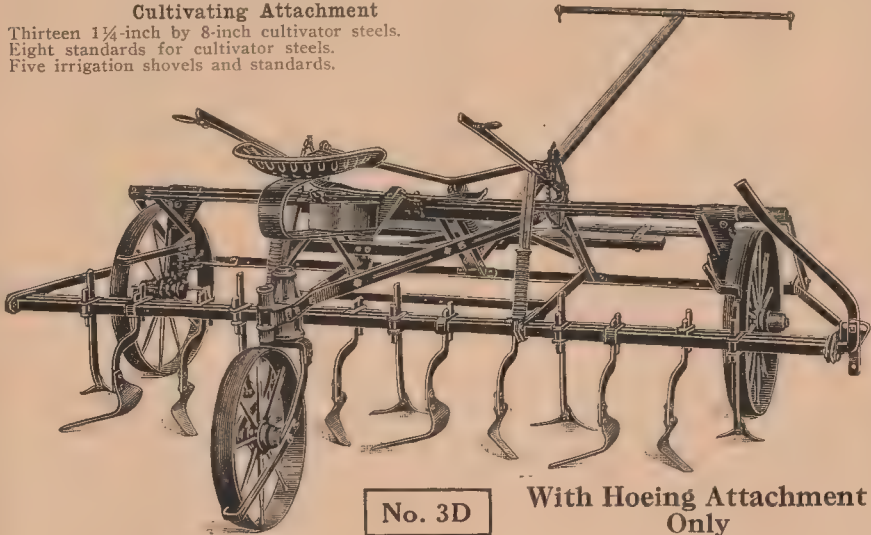
Hoeing Attachment

Four pairs 6-inch beet hoes and standards.
Five 5-inch improved sweeps and standards.
Three 8-inch improved sweeps.

Cultivating Attachment

Thirteen 1¼-inch by 8-inch cultivator steels.
Eight standards for cultivator steels.
Five irrigation shovels and standards.

Packed weight, including hoeing and cultivating attachment, 707 lbs.
Without cultivating attachment, 618 lbs.

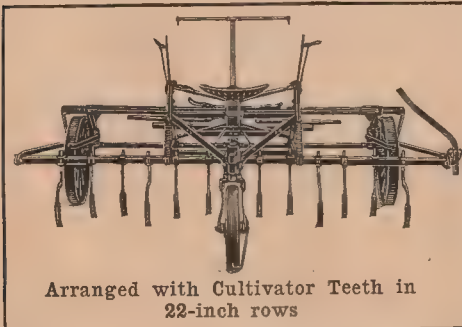


With Hoeing Attachment Only

Packed weight, 618 lbs.

This wonderful tool hoes four rows at once, 18, 20, 22, 24 or 28 inches apart, three rows 24 to 30 inches apart, or two rows 36 inches to 42 inches. For 24-inch rows we recommend the substitution of five 8-inch and three 10-inch Improved Sweeps for the five 5-inch and three 8-inch Improved Sweeps which go with the regular equipment.

For 28-inch rows we recommend five 8-inch and three 12-inch Improved Sweeps in place of the five 5-inch and three 8-inch which go with the regular equipment. Two levers, assisted by a powerful spring, control the depth to a nicety or easily lift the tool bars clear. The hoes have a down cut next the row while shielding the plant; the curved shape allows the closest hoeing at the surface, while rounding away from the roots. The standard is set over away from the beet tops and the front of the hoe is a leaf guard. Both hoes and sweeps are improved. The tongue



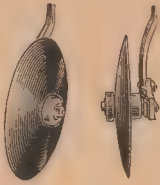
Arranged with Cultivator Teeth in 22-inch rows

is balanced by a heavy spring which removes neck weight and makes the gang lift easy. The new style clamps are firm and accurate. Has umbrella socket and improved wheel scrapers.

The tool bar consists of three stiff steel bars, the rear one, to which the sweeps are attached, being stationary. The right-hand hoes are attached to the front bar and the left hoes to the middle bar. These bars are moved simultaneously in opposite directions by a convenient lever, instantly changing the distance between all the pairs of hoes at once, as needed. The hoes and sweeps are set by figures on the frame.



SUGAR BEET TOOLS



12-inch Discs
Special 12-inch discs can be used in place of the hoes. Very popular in some sections. (Standards extra.)



Disc Cultivation with No. 3 Four-row Beet Cultivator



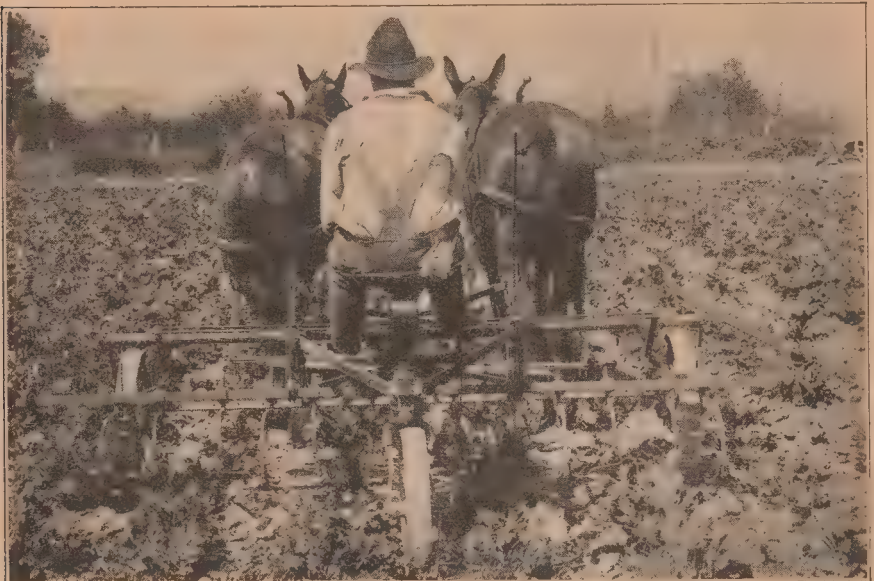
Irrigation Steel and Standard

Crust breaking rollers for use just as the seed is coming through. A pair straddles each row, and the outer edges bearing down the crust, cause it to crack upwards directly over the seed. Also a set of five special irrigation steels and standards, which work behind the hoes, hoeing and ditching thus being done at one passage.

The set of thirteen $1\frac{1}{4}$ x 8-inch steels with standards are valuable for late cultivation of beets and similar crops, and for orchards and fallow ground. All steels specially hardened.



Crust Breakers



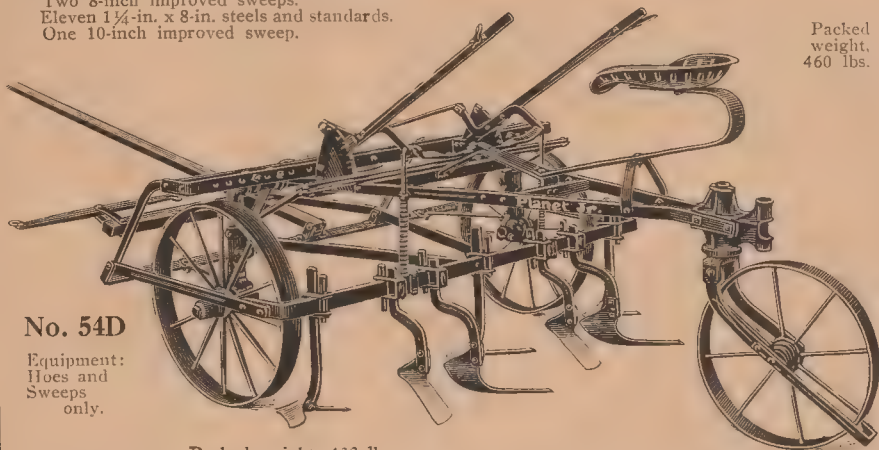
No. 3-4-Row Cultivator in Sugar Beets, Billings, Montana



No. 54 Planet Jr. TWO-ROW CULTIVATOR

Equipment: Two pairs 6-inch hoes and standards.
Two 8-inch improved sweeps.
Eleven 1¼-in. x 8-in. steels and standards.
One 10-inch improved sweep.

Packed weight, 460 lbs.



No. 54D

Equipment:
Hoes and
Sweeps
only.

Packed weight, 432 lbs.

The No. 54 Planet Jr. Two-Row Sugar Beet Riding Cultivator is built on the same general lines as our No. 3 Four-Row machine, but narrower and lighter. It is especially designed for use where soil conditions are too heavy for two horses to handle a four-row machine, or where the ground is not as smooth and level as in irrigated sections.

The wheels have concave rims, are pivoted, and controlled by the same foot-lever steering device as used on the larger machine. They may be set 48 to 56 inches apart for 22- to 30-inch spacing of rows.

The equipment is made to take care of wider spacing of rows common where this Cultivator is largely used. Two pairs of 6-inch Hoes, two 8-inch Sweeps, and one 10-inch Sweep make a complete hoeing equipment for level cultivation of rows up to 28 inches apart.

The Hoes and Sweeps are especially designed to produce thorough cultivation, yet leave the ground in a mellow, level condition. The blades have just enough suction to penetrate hard ground readily and break up the soil. The special curved shape of the hoe nearest the row allows very close cultivation without covering plants or laying roots bare. In a hard crust the inclined portion of cutting edge slices through the surface without pushing the lumps aside, which would injure or destroy the young plants. The front portion of the hoe acts as a leaf-guard. The standards are set over away from the row, leaving room for the plants in later cultivation.

The Improved Sweeps have narrow necks and are nearly flat so that the dirt falls in close behind the standard, leaving the same level cultivation as the hoes.

Shields are desirable for early culti-

vation when using cultivating teeth. They are clamped to the standard above the tooth, and are supplied as an extra.

Irrigation steels (extra) with special long standards work behind the hoes, or can be used alone on the sweep standards. Discs, 12 inches, can be used on the hoe standards; preferred for first cultivation in some sections.

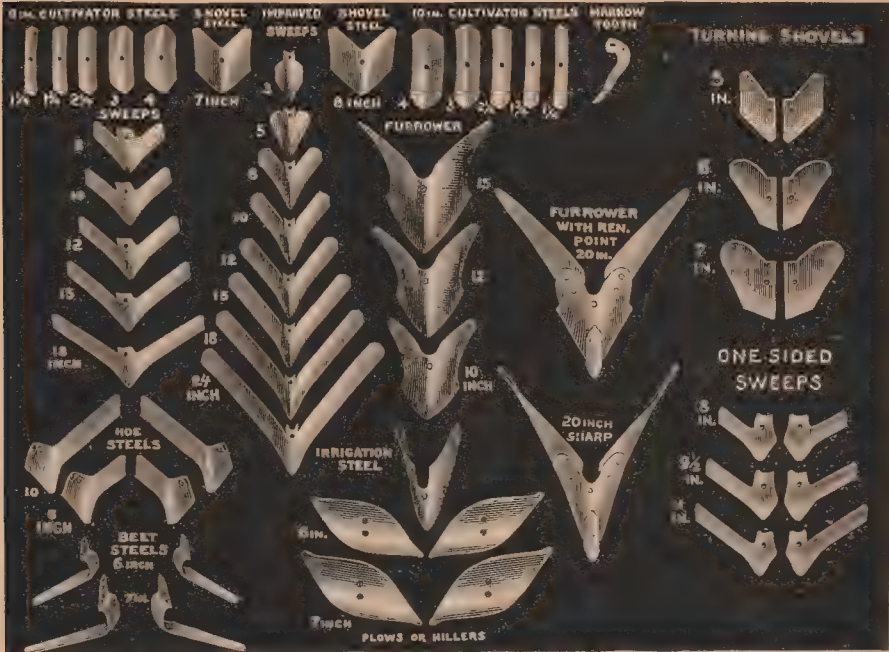
The tool frame is a single heavy bar of high carbon steel. Wedge clamps are used, which enables one to make changes quickly.



No. 54—2-Row Cultivator Working Beans in Michigan



REPAIRS AND EXTRAS FOR HORSE TOOLS



Special Hardening of Steel Parts

Every farmer or gardener desires to have an easy-working tool, as his work is better done with much less power or labor and with much greater satisfaction. For years we have been making extra quality steels for our goods, and they have a high reputation throughout the country wherever used. But never satisfied with good things and good results, when better are within reach, we have been experimenting with the hardening of steel, and we have become more successful with its possibilities than we had ever supposed attainable. Our experiments have been so satisfactory that we have perfected a method by which we are able to offer steels of a higher grade than ever, capable of suiting the most exacting persons or conditions that can be found. This hardening by a special process will be applied to all steel working parts that we make, and this will include all steel plows for our seeders, all moldboards, hoes and cultivator teeth for our wheel hoes, all cultivator teeth for our horse hoes, sweeps, hoe steels, discs, furrowers, alfalfa steels, and everything of that class that we manufacture. We also make some specially-shaped steel plows for our two-horse cultivators. They are guaranteed to work in the most difficult soils in a satisfactory manner.



Section of Planet Jr.
Perfect Bevel Steel
Cultivator Steel

We call special attention to these things on this page because we deem them of special importance to all the public that is interested in the cultivation of the soil. In sandy soils, where the great thing is to obtain something that will wear well, this process gives fine results. For waxy clay soils where the wear amounts to almost nothing, but the easy scouring quality to everything, these steels are the thing. We want you to try them. Many of our steel shapes are covered by patents, and to enable customers to be sure of getting the right quality instead of inferior imitations, we stamp the trade-mark "Planet Jr." on the back. See that you get them, for you need the best, and they are the cheapest in the end, as they are always full length, carefully designed and made, and especially hardened.

Cultivator Steels. We make our regular cultivator steels of beveled steel, which is twice as thick down the center where the wear comes as at the sides, gradually tapering from one to the other. This



special design causes the points to remain sharp and strong, and they do not wear thin or into a notch at the point or bend as the old styles do, therefore giving much longer and much better service. The 8-inch length is made in five widths, and these fit all Planet Jr. horse hoes, plain cultivators, pivot wheel cultivators and orchard cultivators. The 1½-inch and 1¾-inch are for extra deep work; the 2¼-inch for general work in heavy soils; the 3-inch for medium and light soil. The 10-inch length is also made in five widths and fits all our two-horse cultivators except the No. 72, the narrowest being used for deep work, the 2¼-inch for general purposes, and the 3-inch and 4-inch for light lands. All regular Planet Jr. steels have our bolt sleeves to prevent bolts from pulling through, and therefore require but a small-headed bolt and scour better.

Regular sweeps fit all our one- or two-horse cultivators, and are made to cut 6, 8, 10, 12, 15, 18 or 24 inches. Particularly pleasing to growers of cotton, corn, coffee, sugar cane, etc., and in orange groves. Excellent to exterminate quack grass and Canada thistles. On one-horse machines they are generally used in sets of three. (See page 41.) Or a single sweep may be used on the middle standard. The pitch may be adjusted to throw earth toward the row, then being valuable for "dirtin cotton" and for hilling generally.

Improved Flat Sweeps. Made to cut 3, 5, 8, 10, 12, 15, 18 or 24 inches. These are flatter than our regular sweeps and leave the ground more nearly level. They are particularly adapted to sugar beet and bean cultivation and for level cultivation generally. They will not fit horse hoe side standards except on No. 100 series, but will fit all other standards, and also all standards on two-horse cultivators. The 3-inch are used for deep tillage and the wider sizes for shallow work.

One-Sided Sweeps. Made in three sizes, cutting 8, 9½ and 11 inches. They are much liked for bean culture, being used on the horse hoes and cultivators, the short ends next to the row, and generally with a regular sweep in the center.

Turning Shovels. These fit all cultivator standards, and we make three widths, 5-, 6- and 7-inch. They are an entirely new shape, are specially hardened and polished, and will do the very best kind of work with light draft. Useful for plowing away and hilling and for many kinds of heavy work.

Alfalfa Steels. 1¾ x 9 inches. It is quite necessary to cultivate alfalfa to get the best results. Irrigated land especially becomes hard and packed on top and needs to be loosened up without tearing out the plants. The steels are especially designed to meet the needs of this work. They are formed from a right angle section of steel, and break and stir the soil without turning it upside down or tearing out the alfalfa roots injuriously.



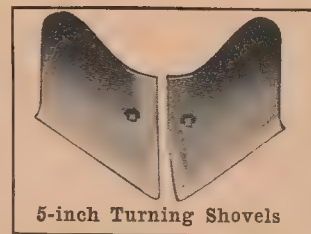
Regular Sweep



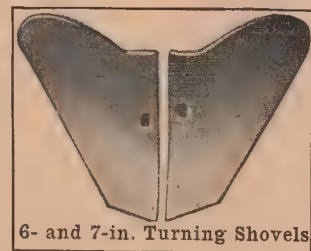
Improved Sweep



One-Sided Sweeps



5-inch Turning Shovels



6- and 7-in. Turning Shovels



Alfalfa Steel



REPAIRS AND EXTRAS FOR HORSE TOOLS



Hoe Steels

Flat Hoe Steels. Two sizes—6- and 10-inch cut—and they are growing in popularity year by year for market garden, cotton and corn cultivation and flat work generally. Horse hoes equipped with these on the side standards and a sweep on the rear make an admirable combination. The hoes cut clean, like the hoe steels on our hand machines, and are sure death to weeds. They fit all horse hoe side standards except No. 100 series, and with a special standard can be used on our two-horse cultivators.



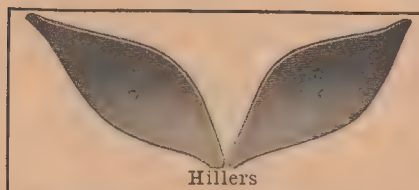
Beet Hoe Steels

Beet Hoe Steels. These are made in three sizes, cutting 6, 7 and 9 inches. Six inch have greater cutting angle and therefore clean more readily. They fit our No. 3 and No. 54 Beet Cultivators and, with special standard, our twelve-tooth harrows or horse hoes. They are admirably designed and do beautiful work. They are shaped so as to act perfectly as leaf guards and also to work very close to the row at the surface while curving away from the roots underneath.



Furrower

Furrowers. We make five styles and sizes. The 10-inch, 12-inch and 15-inch are one piece and designed on fine lines. The 20-inch are made in two styles; with regular body, adjustable wings and renewable point; with sharp body, adjustable wings and renewable point. The first style is sent unless otherwise ordered. The wings can be set to make narrow or wide furrows and do grand work in hilling. They can be removed if desired and the body then makes a neat double plow for opening sharp-bottomed furrows. The renewable point is very economical. These furrowers fit all one- and two-horse cultivators.



Hillers

Hillers. Two sizes, 6 and 7 inches wide, used as plows on the horse hoe, and (by reversing) as hoes.

They have our plow points, are reversible for wear as well as for the two kinds of work, hilling and hoeing. They fit all our horse hoe side standards, and with special clips (576-577) can be attached to Plain Cultivator, Riding and Universal Cultivator standards. The patent plow points give increased penetration and wear.



Shovel Steel

Shovel Steels. Two sizes, 7- and 8-in.

These are the right shape to use on the rear horse hoe or cultivator standards to fill up behind the side plows, and are also used on the two-horse cultivators for marking and furrowing.

Irrigation Steel. Adapted particularly for opening irrigating furrows. Fits all Planet Jr. Cultivators.

Discs. Made in three sizes. The 12-inch are used on horse hoes, cultivators, beet and pivot

wheel cultivators. The 14-inch on pivot wheel cultivators, and Universal cultivators.



Disc



Attachments for Tractors Up to 250 Lbs. Weight

The **Tractor** has successfully entered the field of cultivation and although we make no **Tractors**, we do specialize on all sorts of **cultivating tools and attachments**. Tractor work is more thorough, faster, and cultivation deeper, and the hard places loosened up instead of skimmed over and left to bake harder than ever.

Heavier gauge steel or malleable standards have been substituted to stand the constant strain of the tractor. These tools are **painted green**. Insist when buying that the Tractor be equipped with special "**Planet Jr.**" green tools which are correct design, proper temper, and finish.

6-inch hoes, (S120 & S121) are universally used as Weeders and Cultivators, and should always be on hand. Standards are Malleable; strong enough for every need.

Discs are specially heavy and designed for Tractor use, being 7 inches in diameter with large bearing surfaces and plenty of clearance under axle. Can be used like cut or one or two discs taken off if desired.

R8 Landside plow and **U8 double mouldboard plow** also **M8-N8** plows have longer and heavier malleable standards giving 1 inch more clearance under frames than heretofore and allowing ample room for the furrows to curl over.

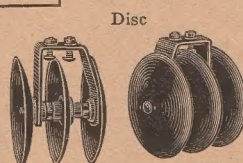
2-inch cultivator teeth (No. 4183); heavy gauge steel; used for deep thorough cultivation where weeds are not abundant.

Narrow Cultivator Teeth
Three Prong Cultivator
Teeth. Onion Harvesters
(See Page 30)

The **Tractor Star Pulverizer** used back of the small Tractor, not only acts as a crust breaker, but as a finishing and mulching tool as well. In combination with the hoes, perfect cultivation can be accomplished. All lumps are cut up and weed roots exposed to the sun to dry up. In wet weather many days can be saved and sometimes the crop, too, as a continuous wet spell often comes at a critical time making hoeing impossible or impractical. With this combination, cultivation can start as soon as the top soil has dried off sufficiently to prevent clogging up Tractor wheels.



S120/121
6" Hoes



Disc

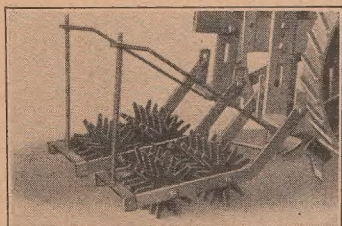
Hoes



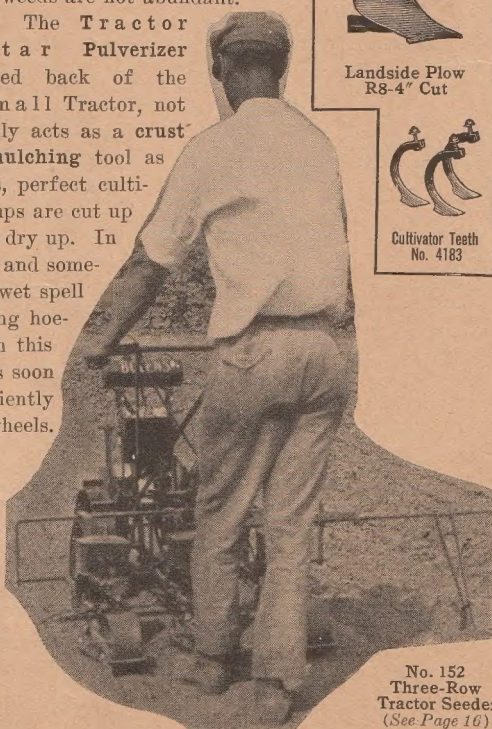
Landside Plow
R8-4" Cut



Cultivator Teeth
No. 4183



Star Pulverizers following Hoes



No. 152
Three-Row
Tractor Seeder
(See Page 16)



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No. 77D, plain.....	55	526

SPRING TRIP STANDARDS

No. 72F, complete.....	53	660
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UNIVERSAL CULTIVATORS

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No. 41, 6 ft. 6 in.....	59	483
No. 41B, 5 ft. 3 in.....	59	403
No. 41D, 4 ft.....	59	376

SPRING TRIP STANDARDS

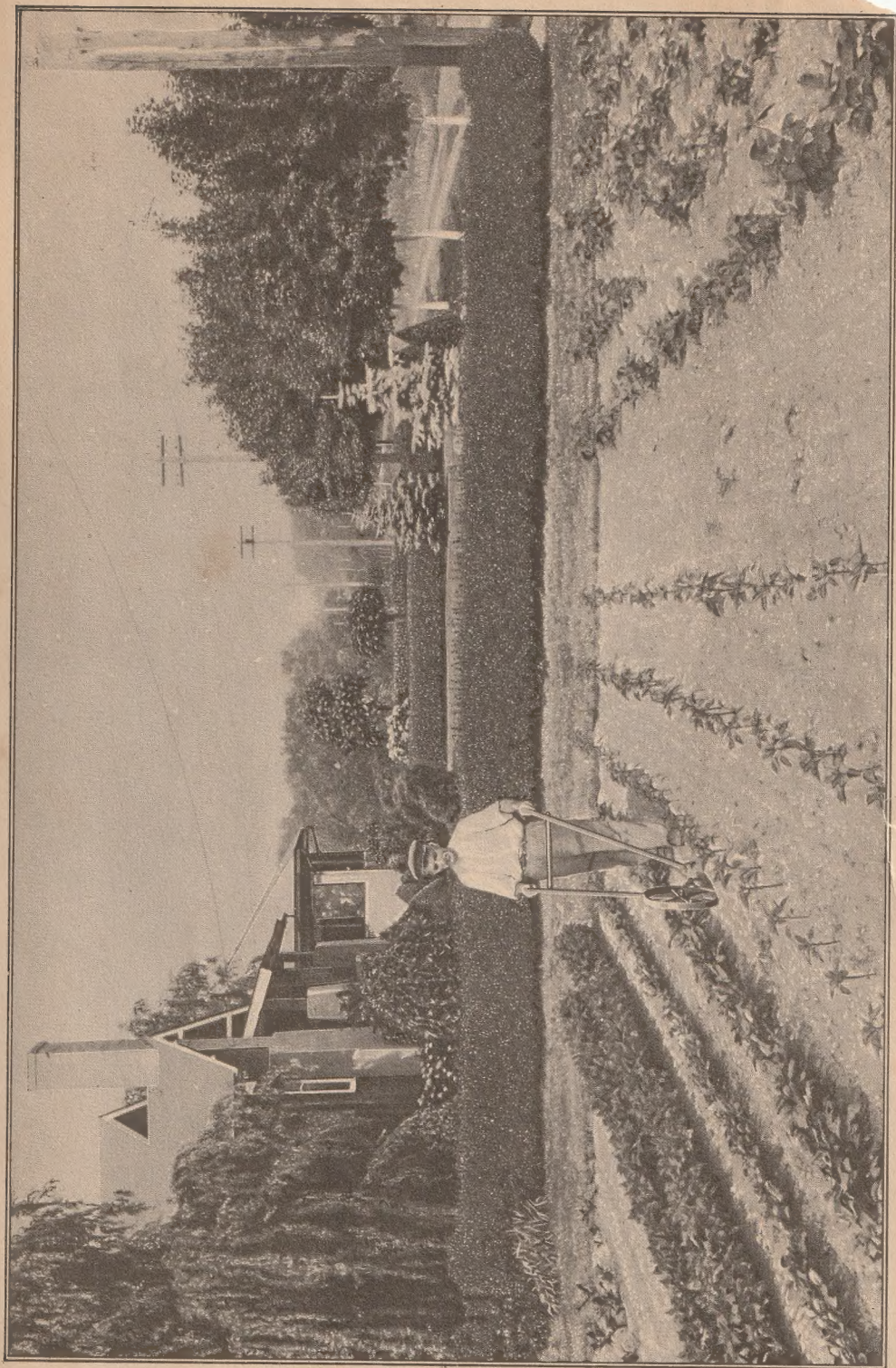
No. 41F, 6 ft. 6 in.....	60	525
No. 41G, 4 ft.....	60	403

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Planet Jr.

FARM AND GARDEN TOOLS

